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## EPIDEMIC INFLUENZA.

### PREVALENCE IN THE UNITED STATES.

In the Public Health Reports of November 8 and 15 were published tables presenting in as brief form as possible a statistical statement of the influenza epidemic in the United States. In the present issue this table has been brought up to date by including the week ended November 16 and by making changes in previous figures in accordance with more recent information. Only those States for which data were received during the past week are included.<sup>1</sup>

The table is based on telegraphic and mail reports to the Public Health Service. The mortality figures for cities have been checked wherever possible with reports to the Bureau of the Census. It should be kept in mind that the statement is far from being complete for any locality or State, particularly with respect to cases of influenza. Influenza was not made a reportable disease until the epidemic was well under way in many localities. In perhaps the great majority of localities where the prevalence of the disease was severe, physicians were too busy to make accurate and prompt reports to local health authorities. Furthermore, it must be obvious that the complete and regular collection and forwarding of reports from a large proportion of counties and towns in practically every State was almost impossible under the extraordinary conditions that prevailed. For these reasons city or State totals for any given week are not exact or even more than approximately accurate. In some cases there are reasons to believe that they are far from accurate, and in nearly all instances, it is believed, the reported figures properly may be considered as considerably below the actual ones. Estimates have been employed in a few instances, but when estimates were necessary those reported by local or State health authorities have been used whenever possible.

With these limitations in mind, the following table should be used only as a rough index of the course of the epidemic in certain sections of the country. It is presented as a preliminary compilation of such data as are now available, since the present data are being supplemented with information that, it is believed, will be more accurate and complete.

<sup>1</sup> In order to assist States in furnishing reports of influenza, the Public Health Service authorized the sending of daily telegraphic reports of influenza at the expense of the Government. These were usually sent by the cities to the States, which telegraphed the compiled information to the bureau. Owing to the decline in the epidemic in most parts of the country, the sending of such telegrams was stopped early in November.

**Cases of Influenza and Deaths from Influenza and Pneumonia (All Forms) as  
Reported to the United States Public Health Service.**

**NEW ENGLAND STATES.**

	Week ending—									
	Sept. 14.	Sept. 21.	Sept. 28.	Oct. 5.	Oct. 12.	Oct. 19.	Oct. 26.	Nov. 2.	Nov. 9.	Nov. 16.
<b>Massachusetts:</b>										
Boston—Deaths.....	46	265	775	1,214	1,027	589	226	137	76	47
Cambridge.....	7	4	105	140	115	63	21	19	5	9
Fall River—Deaths.....		9	20	97	201	192	97	40	24	14
Lowell—Deaths.....	1	8	32	93	141	116	84	30	8	8

**MIDDLE ATLANTIC STATES.**

<b>New York:</b>										
<b>New York City—</b>										
Cases.....		127	1,294	7,197	21,059	32,884	30,736	27,564	3,821	.....
Deaths.....			161	739	2,082	4,217	5,158	4,402	2,277	1,669
<b>Pennsylvania:</b>										
Entire State (excluding Philadelphia)—Deaths.....				573	1,765	5,026	5,210	6,270	5,206	3,521
Philadelphia—Deaths.....				1,625	3,060	4,218	2,341	1,203	375	164

**EAST NORTH CENTRAL STATES.**

<b>Indiana:</b>										
Entire State (excluding Indianapolis)—Cases.....						16,170	9,666	6,061	5,714	4,568
Indianapolis—										
Cases.....					1,510	1,881	1,577	605	330	.....
Deaths.....	3	6	10	24	46	128	115	86	58	9
<b>Illinois:</b>										
Chicago—										
Cases.....				2,210	7,722	12,183	11,846	14,947	.....	.....
Deaths.....			91	417	1,047	2,106	2,367	1,470	738	399
<b>Wisconsin:</b>										
Milwaukee—										
Cases.....						2,117	2,066	918	227	.....
Deaths.....	4	5	13	15	69	113	175	125	95	79

**WEST NORTH CENTRAL STATES.**

<b>Iowa:</b>										
Entire State—										
Cases.....					1,062	17,040	21,117	5,025	3,424	3,279
Deaths.....					13	115	184	112	.....	.....
Des Moines—										
Cases.....					562	751	542	112	204	16
Deaths.....					7	13	8	9	.....	.....
<b>Missouri:</b>										
St. Louis—										
Cases.....		( <sup>5</sup> )			1,904	4,043	3,890	2,376	2,719	1,900
Deaths.....					86	186	233	257	229	228
Kansas City—Deaths.....	5		10	37	96	168	193	197	138	80
<b>Nebraska:</b>										
Number of localities re- porting.....						66	118	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )
Cases.....						17,000	20,835	13,104	7,540	6,400
Deaths.....							1,495	276	136	109
Omaha—Deaths.....	1		2	7	68	160	147	94	117	48
<b>Kansas:</b>										
Number of localities re- porting.....				( <sup>6</sup> )	123	126	92	( <sup>6</sup> )	( <sup>6</sup> )	( <sup>6</sup> )
Cases.....			81	1,327	10,569	14,892	12,154	8,205	8,924	6,069

<sup>1</sup> For 4 days.<sup>2</sup> For 5 days.<sup>3</sup> Influenza only.<sup>4</sup> For less than 100 localities.<sup>5</sup> No outbreak reported on Sept. 19.<sup>6</sup> Entire State.<sup>7</sup> Estimated.

**Cases of Influenza and Deaths from Influenza and Pneumonia (All Forms) as  
Reported to the United States Public Health Service—Continued.**

**SOUTH ATLANTIC STATES.**

	Week ending—									
	Sept. 14.	Sept. 21.	Sept. 28.	Oct. 5.	Oct. 12.	Oct. 19.	Oct. 26.	Nov. 2.	Nov. 9.	Nov. 16.
<b>Maryland:</b>										
Cases.....			1,713	5,302	24,300		10,300	6,376	3,220	4,929
Baltimore—										
Cases.....				3,205	9,300	5,227	2,709	607	85	120
Deaths.....	7	5	19	117	563	1,357	1,073	397	147	51
District of Columbia:										
Cases.....				1,151	9,708	8,105	3,921	1,679	400	394
Deaths.....	10		38	181	547	606	372	154	45	42
West Virginia:										
Charleston—										
Cases.....			7	94	892	718	345	182	67	88
Deaths.....				2	29	32	74	50	19	11
South Carolina:										
Columbia—Cases.....			2	1,253	4,427	1,500	474	87	6	13
Greenville—										
Cases.....			25	225	1,615	631	613	166	3	4
Deaths.....							5			
Spartanburg—Cases.....			7	59	188	299	246	190	49	108
Georgia:										
Augusta—Cases.....			3	34	371	337	239	254	153	226
Atlanta—										
Cases.....				14	836	1,594	598	368	134	124
Deaths.....		7	4	7	30	81	101	45	34	32
Columbus—Cases.....				1	450	828	590	389	164	137

**EAST SOUTH CENTRAL STATES.**

<b>Tennessee:</b>										
Memphis—Deaths.....					80	182	161	71	29	17
Nashville—Deaths.....	2		3	5	129	193	127	54	53	15
<b>Alabama:</b>										
Birmingham—										
Cases.....					5,000	2,444	1,959	774		220
Deaths.....	2	2	5	17	61	110	135	85	46	46

**WEST SOUTH CENTRAL STATES.**

<b>Arkansas:</b>										
Little Rock—Cases.....			33	1,098	3,557	2,844	506	195	94	64
<b>Louisiana:</b>										
State—Cases.....			1,900		15,494	47,062	50,859	35,205	13,607	6,714
New Orleans—										
Cases.....					7,641	17,070	13,810	4,225	724	
Deaths.....			3	29	127	447	813	371	158	76
<b>Oklahoma:</b>										
Number of localities re-										
porting.....				24			28	(1)	23	(1)
Cases.....				1,249		20,019	16,290	5,511	2,650	433
Deaths.....								311		
Oklahoma City—										
Cases.....							383	120	41	12
Deaths.....					81	79	52	40	9	8
<b>Texas:</b>										
El Paso—Deaths.....					25	108	184	82	50	15

**MOUNTAIN STATES.**

<b>Colorado:</b>										
Denver County—Deaths					89	250	240	177	162	119

<sup>1</sup> Total for September.  
<sup>2</sup> For 5 days.  
<sup>3</sup> Estimated.

<sup>4</sup> For entire State.  
<sup>5</sup> Epidemic stated to be probably at height.  
<sup>6</sup> For 4 days.

# Cases of Influenza and Deaths from Influenza and Pneumonia (All Forms) as Reported to the United States Public Health Service—Continued.

## PACIFIC STATES.

	Week ending—									
	Sept. 14.	Sept. 21.	Sept. 28.	Oct. 5.	Oct. 12.	Oct. 19.	Oct. 26.	Nov. 2.	Nov. 9.	Nov. 16.
Washington:										
Seattle—										
Cases.....					2,652	2,169	2,215	2,181	1,600	.....
Deaths.....				3	33	77	158	104	85	69
Oregon:										
Entire State—										
Cases.....			(?)			2,330	2,745	3,760	4,615	2,220
Deaths.....						32	122	222	204	112
Portland—										
Cases.....						879	1,119	1,354	2,092	1,126
Deaths.....						15	86	142	156	87
California:										
Entire State—Cases.....			57	505	4,501	28,315	42,934	27,000	20,000	9,791
San Francisco—										
Cases.....			10	26	496	4,168	8,682	7,168	11,302	.....
Deaths.....	6	14	15	15	19	130	553	738	414	196

<sup>1</sup> For 3 days.<sup>2</sup> No cases to report.<sup>3</sup> For 6 days.<sup>4</sup> For 4 days.

# Number of Deaths from Influenza and Pneumonia (All Forms) for Corresponding Weeks, After the Beginning of the 1918 Epidemic, Compared for Large Cities.<sup>1</sup>

City.	Population.	Week preceding epidemic.	Week of epidemic.							
			First.	Second.	Thirld.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.
Philadelphia.....	1,735,514	76	706	2,637	4,597	3,021	1,203	375	164	.....
Baltimore.....	594,637	19	117	563	1,537	1,073	397	147	51	.....
New Orleans.....	377,010	29	144	624	682	333	158	76	.....	.....
Washington.....	370,000	.....	38	181	547	606	372	164	55	42
Nashville.....	118,136	5	129	193	127	54	53	15	.....	.....
Boston.....	767,813	46	265	775	1,216	1,027	599	126	137	76
San Francisco.....	471,023	19	130	552	738	414	198	.....	.....	.....
Fall River.....	129,828	9	20	97	201	192	97	40	24	14
Richmond.....	158,702	4	41	131	177	128	71	28	23	.....
Lowell.....	114,366	8	32	93	141	116	84	30	8	8
Cambridge.....	114,293	4	105	140	115	63	21	19	5	9
New Haven.....	152,275	2	15	36	77	152	183	168	82	48
Memphis.....	151,877	.....	80	182	166	71	29	17	.....	.....
Dayton.....	128,939	5	31	134	137	115	67	21	.....	.....
Oakland.....	206,405	3	18	42	133	237	157	55	.....	.....
Cleveland.....	692,259	40	168	453	682	524	351	.....	.....	.....
Chicago.....	2,547,201	91	417	1,047	2,105	2,367	1,470	738	390	.....
New York.....	5,737,492	191	733	2,121	4,237	5,201	4,492	2,277	1,050	.....
Omaha.....	177,777	7	68	160	147	94	117	48	.....	.....
Rochester.....	264,714	6	36	102	213	209	104	46	.....	.....
Louisville.....	240,808	14	92	180	181	69	58	39	.....	.....
Birmingham.....	189,716	5	17	61	110	133	85	46	46	.....
Kansas City.....	305,816	10	37	96	168	193	197	138	80	.....
Denver.....	268,439	19	59	139	147	108	101	68	.....	.....
Columbus.....	220,135	10	28	73	117	94	50	36	.....	.....
Atlanta.....	196,144	7	30	81	101	45	34	32	.....	.....
Indianapolis.....	283,622	10	24	46	128	115	84	58	.....	.....
Milwaukee.....	445,008	15	69	113	175	125	95	70	.....	.....
St. Louis.....	768,630	.....	86	156	233	257	229	228	.....	.....

<sup>1</sup> As reported to the U. S. Public Health Service and checked with figures published by the Bureau of the Census.

**Deaths per 100,000 of Population from Influenza and Pneumonia (All Forms) for Corresponding Weeks After the Beginning of the 1918 Epidemic, Compared for Large Cities.<sup>1</sup>**

City.	Population.	Week preceding epidemic.	Week of epidemic.							
			First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.
Philadelphia.....	1,735,514	4.4	40.7	151.8	264.9	174.1	69.3	21.6	9.5	-----
Baltimore.....	594,637	3.2	19.7	94.6	278.7	180.5	66.8	24.7	8.6	-----
New Orleans.....	377,010	7.7	38.2	165.5	180.8	88.4	41.9	20.2	-----	-----
Washington.....	370,000	-----	10.3	48.9	147.9	163.8	100.5	41.6	14.9	11.4
Nashville.....	118,136	4.2	109.2	163.4	107.6	45.7	44.9	12.7	-----	-----
Boston.....	767,813	6.0	34.5	101.0	158.4	133.9	76.7	16.4	17.9	9.9
San Francisco.....	471,023	4.0	27.6	117.2	154.6	87.9	42.0	-----	-----	-----
Fall River.....	129,828	6.9	15.4	74.7	154.8	147.9	74.8	30.8	18.5	30.8
Richmond.....	158,702	2.5	25.8	82.6	111.5	80.7	44.7	17.6	14.5	-----
Lowell.....	114,366	7.0	28.0	81.3	123.3	101.4	73.4	26.2	7.0	7.0
Cambridge.....	114,273	3.5	91.9	122.5	100.6	55.1	18.4	16.6	4.4	7.9
New Haven.....	152,275	1.3	9.9	23.6	50.6	99.8	120.2	110.3	53.8	31.5
Memphis.....	151,877	-----	52.6	119.8	109.4	46.7	19.1	11.2	-----	-----
Dayton.....	128,939	3.9	24.1	103.9	103.3	80.2	51.9	15.3	-----	-----
Oakland.....	203,405	1.5	8.7	20.7	66.8	114.7	75.0	26.6	-----	-----
Cleveland.....	692,259	5.8	24.3	65.4	98.5	75.7	57.7	-----	-----	-----
Chicago.....	2,547,201	3.6	16.4	41.2	82.7	82.9	57.7	28.9	15.8	-----
New York.....	5,737,492	3.3	12.8	37.0	73.9	80.8	76.8	37.7	18.3	-----
Omaha.....	177,777	3.9	38.2	90.0	82.7	52.8	65.9	27.0	-----	-----
Rochester.....	264,714	2.3	13.6	38.6	80.0	79.0	39.3	17.4	-----	-----
Louisville.....	240,808	5.8	38.2	74.8	75.2	28.7	24.1	19.0	-----	-----
Birmingham.....	189,716	2.6	9.0	32.2	58.0	70.1	44.8	24.2	24.2	-----
Kansas City.....	305,816	3.3	12.1	31.4	55.0	63.1	64.4	45.1	23.1	-----
Denver.....	268,439	7.1	22.0	51.8	54.8	40.2	37.6	25.3	-----	-----
Columbus.....	220,135	4.5	12.7	33.2	63.1	42.7	22.7	16.4	-----	-----
Atlanta.....	196,144	3.6	15.3	41.3	51.5	23.0	17.3	14.3	-----	-----
Indianapolis.....	283,622	3.5	8.5	16.2	45.1	40.6	29.6	20.4	-----	-----
Milwaukee.....	445,008	3.4	15.5	25.4	39.3	28.1	21.3	15.7	-----	-----
St. Louis.....	768,630	-----	11.2	20.3	30.3	33.5	29.8	29.7	-----	-----

<sup>1</sup> As reported to the United States Public Health Service and checked with figures published by the Bureau of the Census.

## EPIDEMIC INFLUENZA AMONG AMERICAN SOLDIERS ABROAD.

Students of the present epidemic of influenza will undoubtedly be interested in the following account of influenza among the troops of the American Expeditionary Forces. This is reproduced from Weekly Bulletin No. 28, issued by the office of the chief surgeon, American Expeditionary Forces, October 21, 1918.

### Influenza, Pneumonia, Meningitis.

"During the past two months a second wave of severe influenza infection has swept over France and has spread to all the countries of Europe in about equal force. In the United States the onset of the epidemic was, as is usually the case with pandemics of influenza, about three weeks later than in London and Paris. The first and rather benign phase of the infection, it will be remembered, began in the middle of April and had largely disappeared in the American Expeditionary Forces by the end of July. The second phase, which has not yet reached its maximum incidence, has been characterized by a much higher percentage of initially severe cases and particularly

of pulmonary complications. Coming at the time of the rainy and changeable weather, this new invasion of infectious colds and coughs has been accompanied by a constantly increasing number of pneumonias. New replacement draft detachments arriving with each convoy have added the heaviest percentage of infected men per strength and have shown the highest percentage of complicating pneumonia. It has been a usual observation that when infections of the upper respiratory tract prevail, the incidence of meningitis in the community increases soon after, and this rule prevails at present. An increasing severity of the pneumonia is commonly found when the disease is permitted to pass rapidly through successive hosts.

Week ending.	Cases.					Per cent of deaths among pneumonias.
	Influenza.	Acute bronchitis.	Bronchopneumonia.	Lobar pneumonia.	Meningitis.	
Sept. 13.....	3,066	495	78	401	21	14.5
Sept. 20.....	4,279	476	101	376	18	29.3
Sept. 27.....	3,921	524	154	427	47	31.9
Oct. 4.....	9,285	988	364	671	88	34.9
Oct. 11.....	5,794	860	194	401	134	46.3

"It is known that not less than 200,000 cases of influenza were reported during the past week among the troops in the camps in the United States. It has been officially reported that 80 to 90 per cent of the mobilized army of Switzerland was affected soon after the introduction of the infection by prisoners exchanged through Switzerland from Germany. From official information from Portugal it appears that the influenza infection is no less severe there than in the American Expeditionary Forces, and the pneumonia is of as fatal a type.

"The influenza and pneumonia now prevalent among French civil and military population is at least as severe as in the troops of the American Expeditionary Forces. The areas of heaviest infection of influenza, pneumonia, and meningitis in the American Expeditionary Force are the base ports, the depot divisions, and such training areas in both S. O. S. and advance zones as have received replacements or new organizations still including men exposed to the massive infection which has prevailed on the transports and on troop trains.

"Substantial relief is to be expected soon from the frequently recurring infections introduced through base ports by incoming troops by the following improvements:

"(a) Careful exclusion of men with colds, coughs, and fever from transports at ports of embarkation.

"(b) Equipment of all troops prior to embarking with three blankets, an overcoat, and winter-weight woolen underclothing.

"(c) Reduction of troops carried on transports to 80 per cent of berth capacity.

"(d) Increase of hospitalization capacity on transports to 4 per cent of troops.

"(e) Shelter ready and standing for troops on arrival at base ports, with provision for permanent kitchen and mess service for arriving troops.

"(f) Period of not less than four days, with no heavy duty, on debarking.

"(g) Medical supervision of troops on troop trains.

"(h) Gradual hardening and acclimatization process at depot divisions, with isolation, so far as practicable, of new arrivals from earlier arrivals or permanent troops until infection has been eliminated.

"(i) Increase in the floor space per capita to be provided, wherever practicable, up to 40 square feet per man.

"(j) Separation of adjacent bunks by permanent board or shelter half partitions.

"It will take continued concerted effort by all medical officers in the application of all measures of local sanitation and supervision of the personal hygiene of the men to avoid further extension of influenza with its complicating pneumonias and often coincident meningitis. Men's bodies must be kept warm. Their clothing must be dried at least once a day.

"Sufficient blankets and drying rooms accessible to everyone, especially in the regions immediately back of the fighting front, are indispensable for prevention of pneumonia. In the S. O. S. and in areas occupied by troops in training or reserve the problem is largely one of personal contact and crowding; among the troops at the front it is a question of fatigue and exposure; determination to remedy both will go far to save lives.

"A report from the First Army Corps indicates that pneumonia is not epidemic though prevalent there; that the influenza bacillus and the pneumococcus are the usual infecting bacteria; that incomplete clothing equipment and sleeping in cold and wet are the chief contributing causes."

Special interest attaches to the statement concerning the mild epidemic of influenza in the American Expeditionary Force preceding the severe epidemic now in progress. To many who have followed the course of events this will be a reminder of the mild griplike disease which prevailed in a number of cities in this country last winter. Is it possible that there was a direct relation between these outbreaks? It would be interesting to have available accurate information regarding the prevalence of a griplike infection in various parts of the United States last winter and to see what effect, if any, this had apparently exerted on the course of the severe influenza epidemic just

passing. It will be noted that in the American Expeditionary Force "the heaviest percentage of infected men per strength and the highest percentage of complicating pneumonias" occurred among new replacement draft detachments. Is it possible that the other men possessed a certain degree of immunity because of the earlier mild outbreak?

## Disabling Sickness Among the Population of Seven Cotton Mill Villages of South Carolina in Relation to Family Income.

By EDGAR SYDENSTRICKER, Public Health Statistician; G. A. WHEELER, Assistant Surgeon; and JOSEPH GOLDBERGER, Surgeon, United States Public Health Service.

### I. Introduction.

In connection with the study of the relation of dietary, economic, and other conditions to pellagra incidence in seven cotton-mill villages of South Carolina in 1916,<sup>1</sup> a census of disabling sickness among the population was made during May and June, 1916. Statements were also obtained by the enumerators as to the number of days lost from work by wage-earning persons on account of disability and from other causes during the period from January 1, 1916, to the date of inquiry.

These data have been correlated with certain facts concerning the economic status of mill workers' families as ascertained by the same study, and the results are presented in the following pages.

The study covered 747 households, which, at the date of the census, were composed of 4,161 individuals. Only households of white cotton-mill workers (operatives) were included. The villages are situated in the northwestern part of South Carolina. Each had a population of between 500 and 800 persons, and each constituted a separate and distinct industrial community in which practically the only opportunity for employment was in the cotton mill. The villages may be regarded as generally typical of cotton-mill communities in that section of South Carolina, from the standpoints both of community conditions affecting health and of the economic status of the population. While the morbidity experience afforded by this study is not extensive and caution should be exercised in drawing broad conclusions, the data are presented for the reason that the results seem definite enough to be suggestive of the value of considering differences in family income along with other conditions, in analyzing differences in disability incidence.

The bases and method of the census and of the classification of the population according to family income are first briefly explained. The tabulations then follow.

<sup>1</sup> Goldberger, J., Wheeler, G. A., and Sydenstricker, E.: A study of the Diet of Nonpellagrous and of Pellagrous Households in Textile Mill Communities in 1916. *Journal American Medical Association*, Sept. 21, 1918 (71:944-949).



## II. Method of Census.

Experienced enumerators visited each mill worker's household in the seven mill villages on a date between May 1 and June 30, 1916, and secured, among other data, facts as to the sex, age, occupation, earnings, and regularity of employment of each individual member of the household and as to the income of the family as a whole. Such individuals as were found to be unable to work on account of sickness or accident at the time of the visit were noted and the length of such disability up to the date of inquiry was ascertained.

The definition of disability used in certain recent "sickness surveys" was adopted in order to render the results of this study as comparable as possible to the results of other censuses. According to this definition persons classified as "sick" were those who were "unable to work" on account of sickness or accident, including persons "up and about but unable to work," as well as persons confined to bed at home or in hospitals on account of disease and accident.<sup>1</sup> A distinction was made, however, between accidents suffered while actually engaged in millwork (i. e., those which were plainly industrial accidents) and accidents suffered under other circumstances; industrial accidents were not included as causes of disabling sickness. The number of such accidents was extremely small and, if included, would not modify appreciably the rate per 1,000 for any group of persons considered. Statements as to the duration of each illness to date of inquiry were also secured.

The terms of the definition, "unable to work," obviously had to be interpreted in such a manner as to obtain data for persons at home (i. e., not employed for wages) that would be as comparable as possible with the data obtained for persons employed for wages. For such persons as were confined to bed the definition was easily interpreted in nearly all instances, but it was more difficult to draw the line between disabling and nondisabling sickness for sick persons who were "up and about." The difficulty was experienced principally in the cases of children under the age of employability in the mills (12 years at the time the census was made) and of nonwage-earning women. The enumerators were instructed to note all doubtful cases in detail, and the evidence in each case was considered at the time the schedules received their preliminary editing in the field. Since the enumerators spent from a half hour to an hour or more in each

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<sup>1</sup> Cf. Instructions to Agents, Community Sickness Survey, Rochester, N. Y., September, 1915, by Lee K. Frankel, sixth vice president, and Louis I. Dublin, statistician, Metropolitan Life Insurance Co., U. S. Public Health Reports, p. 3, Feb. 25, 1916 (Reprint No. 326). The instructions to agents defining sickness and duration of sickness were as follows:

"The sick should include:

"(a) Those persons who are up and about, but are unable to work because of sickness or accident.

"(b) Those persons who are confined to bed at home because of disease or accident.

"(c) Those persons who are receiving treatment in hospitals or other institutions for the sick.

"The question 'how long sick to date' should be answered definitely in days, weeks, or months."

household, it was believed that sufficient opportunity was afforded to "size up" the situation with a fair degree of accuracy in all such cases. Finally, in order to have a conservative basis for analysis of the data, all cases of sickness and accident which, after final editing of the schedules, appeared doubtful as to actual disability, were not classified as disabling. These classifications were completed before computations of family income were begun. The resulting tabulations may be described as statements of the minimum rather than the maximum amount of disability as found by the census.

### III. Classification of the Population According to Income.

In classifying the population of the seven cotton-mill villages according to their economic status, family income was used as the basis. Practically all (89 per cent) of the individuals composing the population were members of families who subsisted from family income. The small proportion not subsisting from family income were boarders in the families studied, and may be regarded as living under almost the same conditions as the members of the families with which they boarded. The total population considered thus has been classified according to the income of the families of which they were members or with which they boarded.

1. *Data*.—The data relating to family income were secured at the time of the census by inquiries made of the housewife or of some other responsible member or members of each family, and were supplemented by data from the mill pay rolls. The information obtained from the families covered (a) the rate of daily earnings for each member earning wages during the preceding half month and the rates of daily earnings of all members who had been employed during the 12 preceding months; (b) days not at work for all members who had worked for wages during the 12 preceding months; (c) income from all other sources during the preceding half month, as well as during the preceding 12 months, this information being secured in detail for each source of income. On the basis of this information from the family it was possible to approximate the total income of each family for the half month preceding the visit of the enumerator and, roughly, for any period in the preceding year or for the entire preceding year. It was believed, however, after trial tabulations of the results, that family income during the half month preceding the week in which the enumerator's visit was made would be a fairly accurate and representative indication of family income during the general period under special consideration (the late spring of 1916). Since it was found that approximately 90 per cent of the total incomes of the families studied came from the earnings of wage-earning members, the family statements of earnings during this half-month period were compared with the records on the mill pay rolls. In the great

majority of instances the family statements were found to be substantially correct; but, in order to reduce the error from even slightly inaccurate statements, the mill companies' pay-roll records were used instead of the family statements to supply the earning data. Thus the total income of each family for the half-month period<sup>1</sup> was (a) the amounts earned by wage-earning members employed in the cotton mills as shown by the mill pay rolls, (b) the amounts earned by wage-earning members employed elsewhere, and (c) the amounts received from all other sources, as indicated by statements of responsible informants, during the half-month preceding the week of the enumerator's visit. The basis for classifying families with respect to income, therefore, strictly was the total money income of each family during a 15-day period in May or June, 1916, thus affording a cross-section view of the economic status of the population.

2. *Method.* For the purpose of classifying cotton-mill families according to income, the conventional method of using total family income for a given period was found to be so inaccurate in many instances as to be misleading. The average total annual cash income of all of the families for which income data were secured was about \$700, and relatively few had annual incomes of over \$1,000; the range of total income thus was relatively small and the families were, from this point of view, fairly homogeneous. They differed, however, very markedly in size and with respect to the age and sex of their members. Manifestly it was improper to classify, for example, a family whose half-month's income was \$40, and which was composed of only a man and his wife, in the same income class as a family whose half-month's income was also \$40, but which was composed of a man and his wife and several dependent children. Since family income, for the purpose of this study, was used as an index of the economic status of the individuals who composed the family group, it was necessary to take into consideration the number of such individuals in comparing one family with another. A per capita statement of income, however, while more accurate than the statement of total income, was subject to the inaccuracy arising from differences in the age and sex of the members of the families to be compared. It appeared advisable, therefore, to employ a common denominator to which could be reduced the individuals of both sexes and of all ages in order to afford a more nearly representative method of expression of the relative size of the families to be compared. In the absence of a better common denominator for this purpose, the Atwater scale of basal food requirements was employed, and the size of each family was computed according to this scale and expressed in terms of

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<sup>1</sup> A half-month period was used, because a majority of the mills in the villages paid at semimonthly intervals. The pay-roll data from the other mills were adjusted to a half-month basis.

"adult male units."<sup>1</sup> The assumption in the use of this scale was that the expenditures for individuals varied according to sex and age in the same proportion as their basal food requirements. The assumption is by no means as accurate as could be desired; in its favor, however, it may be said that since family expenditures in the great majority of cases equaled total family income, and since food expenditures were nearly half (among poorer families considerably more than half) of total expenditures, a scale based even on food requirements alone is obviously very much more accurate than one omitting any consideration whatsoever of the number, sex, and age of the individuals composing the families to be compared with respect to income.<sup>2</sup>

<sup>1</sup> Principles of Nutrition and Nutritive Value of Food, by W. O. Atwater: U. S. Department of Agriculture, Farmers' Bulletin No. 142 (1915 ed.), p. 33. The scale used was as follows:

Age.	Equivalent adult male unit.	
	Male.	Female.
Adult (over 16).....	1.0	0.8
15 to 16.....	.9	.8
13 to 14.....	.8	.7
12.....	.7	.6
10 to 11.....	.6	.6
6 to 9.....	.5	.5
2 to 5.....	.4	.4
Under 2.....	.3	.3

<sup>2</sup> In order to establish a more accurate basis for computing the size of families in comparing their incomes, a detailed study of expenditures for individual families in cotton-mill villages was undertaken during 1917. While the tabulations of these data have not yet been completed, it is indicated that the Atwater scale is roughly indicative of the variations, according to sex and age, in the consumption of all articles for which there are individual expenditures. It should be noted that before using the Atwater scale in the preliminary computations of family income, several published estimates of the cost of maintenance for individuals of various ages were examined. These estimates were based, in several instances, upon the results of investigations of actual expenditures of individual members of families. Using the estimated expenditures for an adult male as 100, the estimates for individuals of other ages of either sex were expressed relatively and compared with the Atwater scale. It appeared that, in most instances, the scales were fairly similar. The following table, computed from probably the most pertinent data available, indicates the relative cost of maintenance (at "a fair standard of living") for a year of individuals of various ages as estimated for Southern cotton-mill workers by the United States Bureau of Labor in 1911, in comparison with the Atwater scale for basal food requirements:

Age.	Males.		Females.	
	Individual expenses (Bureau of Labor).	Food requirements (Atwater).	Individual expenses (Bureau of Labor).	Food requirements (Atwater).
Adult (over 16).....	100	100	89	80
15 to 16.....	85	80	79	80
13 to 14.....	72	80	67	70
12.....	61	70	57	60
10 to 11.....	56	60	59	60
6 to 9.....	45	50	46	50
2 to 5.....	34	40	35	40
Under 2.....	26	30	26	30

The individual expenses estimated were for food (estimated by the Bureau of Labor, according to the Atwater scale), clothing, medical attendance and medicine, insurance, amusements, tobacco, and school books. See Report on Condition of Women and Child Wage-earners in the United States: Vol. XVI, Family Budgets of Typical Cotton-Mill Workers by Wood F. Worchester and Daisy Worthington Worchester (Sen. Doc. 645, 61 Cong. 2d Sess., 1911, p. 150).

For preliminary purposes, therefore, the total income of each family, as defined above, has been divided by the number of "adult male units" subsisting on the family income, and the resulting figure has been termed the "family income per adult male unit."

3. *Classification.*—The 747 families for which income data were sufficiently accurate and complete for consideration have been classified by this method and grouped into four convenient classes, each containing a fair proportion of the total number and affording, at the same time, opportunity for contrasting families with the lowest incomes with those having the highest incomes. Table I presents this classification as well as the resulting classification of individuals and their equivalent "adult male units."

TABLE I.—*Number of families and members of families and their equivalents in adult male units in seven cotton-mill villages of South Carolina, classified according to family income during a 15-day period between Apr. 15 and June 16, 1916.*

Half-month family income per adult male unit.	Families.	Persons. <sup>1</sup>	Equivalent adult male units. <sup>2</sup>
	<i>Number.</i>	<i>Number.</i>	<i>Number.</i>
Less than \$6.....	217	1,289	866.2
\$6 to \$7.99.....	181	972	675.9
\$8 to \$9.99.....	139	704	529.2
\$10 and over.....	208	800	607.1
All incomes.....	747	3,765	2,678.2
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
	100.0	100.0	100.0
Less than \$6.....	29.1	34.2	32.4
\$6 to \$7.99.....	24.5	25.8	25.2
\$8 to \$9.99.....	18.6	18.7	19.8
\$10 and over.....	27.9	21.3	22.6

<sup>1</sup> Exclusive of persons paying board and including only those dependent upon family income.

<sup>2</sup> According to the Atwater scale for basal food requirements.

The differences in income are also indicated in Table II, which shows the average income during the half-month period per family, per person, and per "adult male unit."

TABLE II.—*Average half-month family income, computed in terms of "per family," "per person," and "per adult male unit,"<sup>1</sup> for various income classes of the population in seven cotton-mill villages in South Carolina.*

Half-month family income per adult male unit.	All family income during a half month.	Average income during a half month.		
		Per family.	Per person. <sup>2</sup>	Per adult male unit. <sup>2</sup>
Less than \$6.....	\$3,990.45	\$18.38	\$3.09	\$4.61
\$6 to \$7.99.....	4,780.85	26.12	4.92	7.07
\$8 to \$9.99.....	4,642.29	33.40	6.55	8.77
\$10 and over.....	7,777.99	37.39	9.72	12.81
All incomes.....	21,191.58	28.36	5.63	7.92

<sup>1</sup> According to the Atwater scale for basal food requirements.

<sup>2</sup> Exclusive of persons paying board, and including only those dependent upon family income.

It will be noted that Table II is clearly suggestive of the fact that the same *general* differences in *average* incomes for the four groups are indicated by any of the three methods of classification according to income to which reference has already been made—total family income, income per capita, and income per “adult male unit.”<sup>1</sup> The

Family income per adult male unit.	Relative average income during a half month per—		
	Family.	Person.	Adult male unit.
All incomes.....	100	100	100
Under \$6.....	65	55	58
\$6 to \$7.99.....	92	87	89
\$8 to \$9.99.....	118	116	112
\$10 and over.....	132	173	162

“adult male unit” method, however, is believed to be more accurate than either of the two other methods, for reasons already stated, for the actual classification of individual families.

#### IV. Disability Incidence According to Income.

Upon the foregoing basis of income classification the sickness rate among persons who were members of households with low incomes was found to be markedly higher than among persons with a more favorable economic status. This condition was found to prevail not only among wage-earning persons, but also among non-wage-earning persons. The data are given in Table III and the rates are plotted in Figure I.

TABLE III.—*Cases of disabling sickness and rate per 1,000 persons, as ascertained by a census of seven cotton-mill villages of South Carolina during May and June, 1916, classified according to family income.*

#### ALL PERSONS.

Half-month family income per adult male unit. <sup>1</sup>	Number of persons considered.	Sick persons. <sup>2</sup>	
		Number.	Per 1,000 persons considered.
Less than \$6.....	1,312	92	70.1
\$6 to \$7.99.....	1,038	50	48.2
\$8 to \$9.99.....	784	27	34.4
\$10 and over.....	1,077	19	18.5
All incomes.....	4,161	188	45.2

<sup>1</sup> The relative average income in the four classes according to each method has been computed in the following table, the average income of all families according to each method being used as the base:

<sup>2</sup> According to the Atwater scale of basal food requirements.

<sup>3</sup> Exclusive of disability due to confinement.

TABLE III.—Cases of disabling sickness and rate per 1,000 persons, as ascertained by a census of seven cotton-mill villages of South Carolina during May and June, 1916, classified according to family income—Continued.

## WAGE-EARNING PERSONS.

Half-month family income per adult male unit.	Number of persons considered.	Sick persons.	
		Number.	Per 1,000 persons considered.
Less than \$6.....	450	36	80.0
\$6 to \$7.99.....	476	22	51.6
\$8 to \$9.99.....	476	8	18.8
\$10 and over.....	538	8	14.9
All incomes.....	1,840	74	40.2

## NONWAGE-EARNING PERSONS.

Less than \$6.....	862	56	65.0
\$6 to \$7.99.....	612	28	45.8
\$8 to \$9.99.....	358	19	53.1
\$10 and over.....	489	11	22.5
All incomes.....	2,321	114	49.1

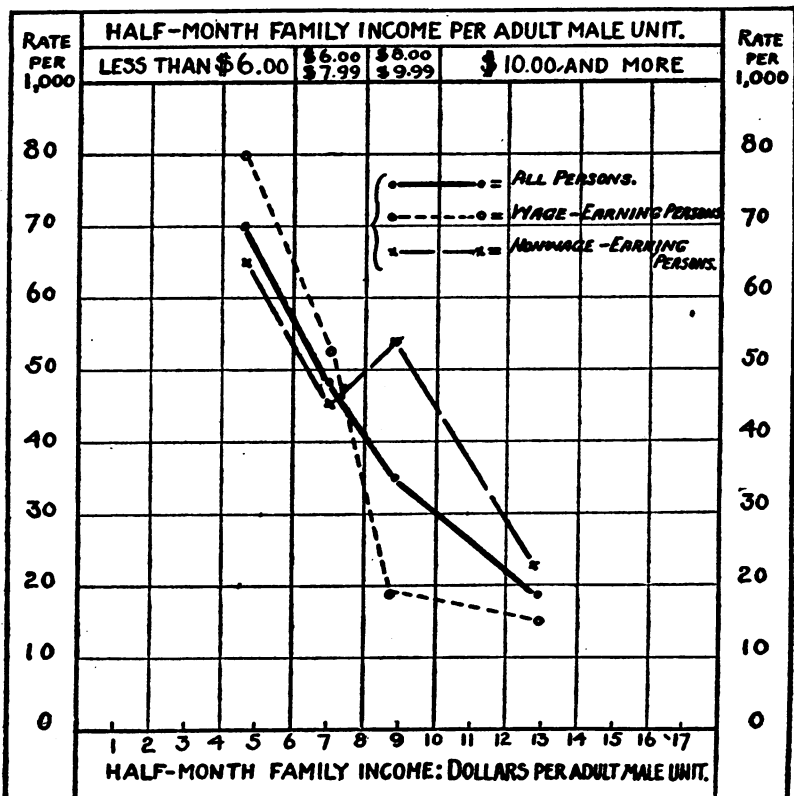


FIG. 1.—Disabling sickness in seven cotton-mill villages, as ascertained by a census in May and June, 1916, among all persons, and wage-earning and nonwage-earning persons, classified according to family income. (See Table III.)

The results of the sickness census are corroborated, as far as wage-earning persons are concerned, by the records of working days lost on account of disability during the period January to May, 1916. These records are presented in brief form in Table IV.<sup>1</sup>

TABLE IV.—*Number and per cent of total possible working days lost from all causes and from disability by wage-earning members of families in seven cotton-mill villages of South Carolina during January–May, 1916, the wage earners being classified according to family income.*

Half month family income per adult male unit.	Average number of wage-earning persons per month.	Total number of possible working days.	Days not at work.				Per cent of total days not at work, lost on account of disability.
			From all causes.		From disability.		
			Number of days.	Per cent of total possible working days.	Number of days.	Per cent of total possible working days.	
Less than \$6.....	375	47,753	7,736	15.5	2,939	5.9	38.0
\$6 to \$7.99.....	347	44,148	4,631	10.3	1,611	3.6	34.7
\$8 to \$9.99.....	306	37,191	3,114	7.9	1,005	2.6	32.3
\$10 and over.....	491	50,023	5,326	10.6	1,153	2.3	21.6
All incomes.....	1,541	183,918	20,807	11.3	6,707	3.6	32.2

It is of interest to compare the sick rate per 1,000 persons of different family incomes in these cotton mill villages with that found in other sickness censuses. The sick rate per 1,000 persons (only sickness involving inability to work being considered) as ascertained by a number of community-sickness surveys conducted in various localities in the United States by the Metropolitan Life Insurance Co. was found to be 18.8 for 579,197 persons of all ages.<sup>2</sup>

If this rate of 18.8 may be considered as a normal one, the suggestion is afforded that in these South Carolina mill villages the normal sick rate was approximated only among those persons who were members of families with half-month income per adult male unit of \$10<sup>3</sup> and over, and that in families with incomes lower than this level the sickness rate was markedly higher.

<sup>1</sup> It will be noted that the percentages of working days lost on account of disability during the five-months' period (Table IV) appear to be lower in most instances than the percentages of wage earners actually found to be incapacitated on the date of inquiry (Table III). When the percentages of working days lost on account of disability were compared for months, it was also seen that the rate of disability was somewhat higher in May than in preceding months. This higher rate, as shown by the census in May–June and by percentages of working days lost, was probably due in part to the fact that instances of short illnesses prior to the date of inquiry were not recalled by the informants. In view of the relatively high rate of pellagra prevalence in May and June, however, it appears proper to suggest that a higher rate of disability in May and June probably actually occurred, partly, at least, because of pellagra.

<sup>2</sup> See Appendix B: Combined Sickness Experience of the Company's Surveys, 1915 to 1917, of the Metropolitan Life Insurance Co.'s publication, "Sickness Survey of Principal Cities in Pennsylvania, and West Virginia," by Lee K. Fran'el, Ph. D., third vice president and Louis I. Dublin, Ph. D., statistician. The "combined sickness experience" referred to included the results of sickness surveys made in localities in Pennsylvania, West Virginia, and North Carolina, Kansas City (Mo.), Boston, Rochester, Trenton, and Chelsea (New York City).

<sup>3</sup> Expressed in terms of gross annual family income this would be approximately \$900, for a "normal" family of 3.3 adult male units (man, wife, and three children under 14 years of age). To render this figure comparable to family income statistics for typical communities elsewhere in the United States, an addition should be made for higher rent expenditures since the rent cost for cotton mill families in the villages studied was relatively very low. Allowing for an expenditure for rent similar to that for families of this income in other localities, as shown by various studies of workmen's family budgets, the equivalent annual income would be approximately \$900 or over.



That possible differences in sex and age of the persons comprising the various income classes do not account for differences in the sickness rate among persons of different incomes is indicated in Table V, in which are shown the rates among males and females of different ages in families with incomes above and below the average.<sup>1</sup>

TABLE V.—Cases of disabling sickness and rates per 1,000 persons as ascertained by a census of seven cotton-mill villages of South Carolina in May and June, 1916, the persons being classified according to income, sex, and age.

ALL INCOMES.

Age.	Total.			Males.			Females.				
	Number of persons.	Number sick. <sup>1</sup>	Rate per 1,000.	Number of persons.	Number sick.	Rate per 1,000.	Number of persons.	All cases.		Exclusive of confinement cases.	
								Number sick.	Rate per 1,000.	Number sick.	Rate per 1,000.
Under 5 years.....	648	43	66.3	339	24	70.8	309	19	61.5	19	61.5
5 to 9 years.....	609	12	19.7	313	6	19.2	296	6	20.3	6	20.3
10 to 14 years.....	537	20	37.3	279	6	21.5	258	14	54.3	14	54.3
15 to 24 years.....	977	37	37.9	463	12	25.9	514	32	62.2	25	48.7
25 to 34 years.....	606	27	44.6	297	8	27.9	319	23	72.1	19	59.6
35 to 44 years.....	392	21	53.6	200	10	50.0	192	15	78.1	11	57.4
45 to 54 years.....	213	12	56.4	103	5	45.9	104	7	67.3	7	67.3
55 to 64 years.....	107	9	84.1	48	6	125.0	59	3	50.8	3	50.8
65 years and over.....	72	8	111.2	33	3	90.0	39	5	128.0	5	128.2
Total.....	4,161	189	45.4	2,071	80	38.6	2,090	124	53.3	109	52.2

FAMILY INCOME OF LESS THAN \$3 PER ADULT MALE UNIT.

Under 5 years.....	422	30	71.1	212	15	70.8	210	15	71.4	15	71.4
5 to 9 years.....	417	10	24.0	215	4	18.6	202	6	29.7	6	29.7
10 to 14 years.....	344	18	52.3	187	5	26.7	157	13	82.8	13	82.8
15 to 24 years.....	427	27	63.2	209	11	55.0	227	22	96.9	16	70.5
25 to 34 years.....	310	17	54.8	135	5	37.0	175	15	85.8	12	68.6
35 to 44 years.....	224	20	89.3	115	10	87.0	109	13	119.3	10	91.8
45 to 54 years.....	109	7	64.2	61	5	82.0	48	2	41.7	2	41.7
55 to 64 years.....	45	5	111.2	22	4	181.3	23	1	43.5	1	43.5
65 years and over.....	52	8	153.8	24	3	125.0	28	5	178.6	5	178.6
Total.....	2,350	142	60.4	1,171	62	53.0	1,179	92	78.1	80	67.8

FAMILY INCOME OF \$3 OR MORE PER ADULT MALE UNIT.

Under 5 years.....	226	13	57.5	127	9	70.8	99	4	40.4	4	40.4
5 to 9 years.....	192	2	10.4	98	2	20.4	94	1	9.9	1	9.9
10 to 14 years.....	193	2	10.4	92	1	10.9	101	1	9.9	1	9.9
15 to 24 years.....	550	10	18.2	263	1	3.8	287	10	34.8	9	31.4
25 to 34 years.....	296	10	33.8	152	3	19.7	144	8	55.6	7	44.6
35 to 44 years.....	165	1	5.9	85	.....	.....	83	2	24.1	1	12.1
45 to 54 years.....	104	5	48.1	48	.....	.....	56	5	89.3	5	89.3
55 to 64 years.....	62	2	32.3	26	2	76.9	36	2	55.6	2	55.6
65 years and over.....	20	.....	.....	9	.....	.....	11	.....	.....	.....	.....
Total.....	1,811	47	26.0	900	18	20.0	911	32	35.1	29	31.9

<sup>1</sup> Exclusive of disability due to confinement.

In practically every age period for either sex the sick rate was distinctly greater in families of low incomes than in families with in-

<sup>1</sup> The average half-month income per adult male unit for all families in the villages studied was approximately \$8 (\$7.92).

comes above the average. The same condition is indicated when only wage-earning persons are considered, as shown in Table VI:

TABLE VI.—Cases of disabling sickness per 1,000 wage earners, as ascertained by a census of seven cotton-mill villages of South Carolina in May and June, 1916, the wage earners being classified according to income, sex, and age.

## ALL INCOMES.

Age.	Total.			Males.			Females.		
	Number of persons.	Number sick. <sup>1</sup>	Rate per 1,000.	Number of persons.	Number sick.	Rate per 1,000.	Number of persons.	Number sick. <sup>1</sup>	Rate per 1,000.
10 to 14 years.....	235	9	38.3	137	5	36.5	98	4	40.8
15 to 24 years.....	799	27	33.8	449	11	24.5	350	16	45.7
25 to 34 years.....	408	14	34.5	279	8	28.7	127	6	47.2
35 to 44 years.....	233	13	54.6	194	9	46.4	44	4	90.9
45 to 54 years.....	107	5	46.7	98	4	40.8	9	1	111.1
55 years and over.....	55	6	109.2	50	6	100.0	5	1	200.0
Total.....	1,840	74	40.2	1,207	42	34.8	633	32	50.6

## FAMILY INCOME OF LESS THAN \$8 PER ADULT MALE UNIT.

10 to 14 years.....	145	8	55.2	87	5	57.5	58	3	51.7
15 to 24 years.....	325	20	61.5	194	10	51.5	131	10	76.3
25 to 34 years.....	191	9	47.1	135	5	37.0	56	4	71.4
35 to 44 years.....	130	12	92.3	110	9	81.8	20	3	150.0
45 to 54 years.....	58	4	69.0	54	4	74.1	4	.....	.....
55 years and over.....	27	5	185.2	23	4	173.9	4	1	250.0
Total.....	876	58	66.2	603	37	61.3	273	21	76.9

## FAMILY INCOME OF \$8 OR MORE PER ADULT MALE UNIT.

10 to 14 years.....	90	1	10.9	50	.....	.....	40	1	25.0
15 to 24 years.....	474	7	14.8	255	1	3.9	219	6	27.4
25 to 34 years.....	215	5	23.3	144	3	20.8	71	2	28.2
35 to 44 years.....	108	1	9.3	84	.....	.....	24	1	41.7
45 to 54 years.....	49	1	20.4	44	.....	.....	5	1	200.0
55 years and over.....	28	1	35.7	27	1	37.0	1	.....	.....
Total.....	964	16	16.6	604	5	8.3	360	11	30.6

<sup>1</sup> Exclusive of disability due to confinement.

A comparison of the sickness rates among mill-working and non-mill working persons is possible only for females since practically all males of wage-earning age were employed in the mills. Females, however, were almost evenly divided among mill working and nonmill-working occupations. In Table VII is shown a comparison of the sick rate for nonmill-working and mill-working females in families of different incomes:

TABLE VII.—Cases of disabling sickness of less than three months' duration (exclusive of confinement cases) among females between the ages of 10 and 45 years, as ascertained by a census of households during May and June, 1916, in seven cotton-mill villages of South Carolina, females being classified according to family income and employment in millwork.

Half-month family income per adult male unit.	Nonmill working.			Mill working.		
	Number of females.	Number sick.	Rate per 1,000.	Number of females.	Number sick.	Rate per 1,000.
Less than \$8.....	403	20	49.6	265	15	57.9
\$8 and over.....	261	6	23.0	354	10	28.2
All incomes.....	664	26	39.2	619	25	45.2

In order to put nonmill-working and mill-working females on as comparable a basis as possible—(1) disability due to confinement was excluded, (2) only those females of the ages at which they were found to work in the mills were considered (i. e., roughly between the ages of 10 and 45), and (3) cases of invalidism were excluded from consideration as far as practicable by considering only those persons whose disability was less than three months up to the date of the inquiry.

The resulting sickness rates suggest that, without respect to the question of family economic status, mill-working females probably were more subject to disabling sickness than nonmill-working females. The suggestion is strengthened by the presumption that in enumerating cases of disability the tendency might have been to include some sickness among women not employed for wages which would not have been disabling had these women been employed.

The experience is too small to warrant the attaching of much significance to the relatively slight difference for mill-working and nonmill-working women without regard to economic status. When the females are classified according to family income, however, the indication is afforded that higher family income is a more striking concomitant of low sickness incidence than millwork. In fact, the suggestion is afforded by this study that the higher incidence among mill-working females was more pronounced among those whose family incomes were under the average than among those whose family incomes were on a higher level.

In this connection it is of interest to note that among the same persons (as classified in Table VII) the pellagra rate was the reverse of the sickness rate.<sup>1</sup> Among nonmill-working females the 1916

<sup>1</sup> Cases of disabling sickness of less than three months' duration (exclusive of confinements), as ascertained by a census in May and June, 1916, and of pellagra during 1916, among non-mill-working and mill-working females between the ages of 10 and 45, in seven cotton-mill villages of South Carolina.

	• Nonmill working.			Mill working.		
	Number of persons.	Cases.		Number of persons.	Cases.	
		Number.	Rate per 1,000.		Number.	Rate per 1,000.
Disabling sickness at date of census.....	664	26	39.2	619	28	45.2
Pellagra during 1916.....	657	33	50.2	625	8	12.8

The actual rate of pellagra prevalence during 1916 can not, of course, be compared with the rate of disabling illness as found for one day. The relative differences in rates according to occupation, however, are comparable, especially when the fact is taken into consideration that the majority of the pellagra cases had their onsets in May and June, the same months in which the census of disabling sickness was made.

It may be mentioned that the cases of pellagra occurred almost entirely among individuals whose family incomes were below the average. The data relating to pellagra incidence according to sex, age, occupation, economic status, etc., which were collected in the study of cotton-mill villages, will be presented in later publications.

pellagra rate was approximately four times as high as that among mill-working females. Pellagra, therefore, appeared to be relatively an unimportant cause of the higher sickness rate among mill-working females, and, conversely, the disability indicated by the higher sickness rate in mill-working females appeared not to influence appreciably the pellagra rate in this group. This does not afford any support to the view entertained in many directions that general debility is necessarily a contributing factor in the production of pellagra.

A classification of disabling sickness according to duration to date of inquiry among persons of different family economic status has been attempted in Table VIII:

TABLE VIII.—*The relation of family income to the duration of disabling sickness in families of mill workers, as ascertained by a census in May and June, 1916, of seven cotton-mill villages in South Carolina.*

BOTH SEXES.

Nature of sickness.	Half-month family income per adult male unit.	Number of cases.				Per cent of cases of each duration.			
		Duration of illness.				Duration of illness.			
		Any length.	Less than two weeks.	Two weeks but less than two months.	Two months or longer.	Any length.	Less than two weeks.	Two weeks but less than two months.	Two months or longer.
All cases.....	Less than \$8.....	153	57	48	48	100.0	37.2	31.4	31.4
	\$8 or more.....	49	23	17	9	100.0	46.9	34.7	18.4
Exclusive of confinement.	Less than \$8.....	141	53	42	46	100.0	37.6	29.8	32.6
	\$8 or more.....	46	22	15	9	100.0	47.9	32.6	19.6

MALE.

All cases.....	Less than \$8.....	62	27	16	19	100.0	43.6	25.8	30.7
	\$8 or more.....	17	8	7	2	100.0	47.0	41.2	11.8

FEMALES.

Exclusive of confinement.	Less than \$8.....	79	26	26	27	100.0	32.9	32.9	34.2
	\$8 or more.....	29	14	8	7	100.0	48.3	27.6	24.1
Cases of confinement.	Less than \$8.....	12	4	6	2	100.0	33.3	50.0	16.7
	\$8 or more.....	3	1	2	.....	100.0	33.3	66.7	.....
All cases.....	Less than \$8.....	91	30	32	29	100.0	33.0	35.2	31.9
	\$8 or more.....	32	15	10	7	100.0	46.9	31.3	21.9

The condition is suggested that, for both males and females, a greater proportion of disabling sicknesses were of long duration (two months or longer) in families with incomes below the average than in families of higher incomes.

## CONCLUSIONS.

While extreme caution should be exercised in drawing broad conclusions from so small an amount of data, the experience derived from the census of sickness and from the records of working days lost on account of sickness in the seven cotton-mill villages studied appears to suggest the following:

1. A higher sickness (involving inability to work) rate and a greater amount of working time lost on account of such sickness were found among members of families whose incomes were low than among members of families with a more favorable economic status. This condition appeared for persons of either sex and of similar ages. Only when a family income approximated \$10 per half month per adult male unit (or about \$900 a year for a family of "normal" size in 1916) did the sickness rate appear to be as low as that suggested by similar censuses in a number of localities in the United States as the normal rate.

2. Low economic status appeared to be a more striking concomitant of high sickness rate among females than employment in millwork.

3. A greater proportion of disabling illness, of relatively long duration, appeared among persons whose family income was below the average than among persons with a more favorable economic status.

To what extent low family income was a cause of higher sickness rate and to what extent it was an effect of disability (and thus of inability to increase income) can not, of course, be determined from these data. The condition, however, is manifest that a greater amount of disabling sickness existed among persons who were living under less favorable economic conditions than among persons whose economic status was more favorable—a condition which has been pointed out by previous observations in the literature on the social aspects of ill health and indicated by several recent studies.<sup>1</sup> The data here presented afford additional ground for the suggestion that in the analysis of morbidity facts the factor of economic status should be given proper emphasis.

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<sup>1</sup> For example, physical examinations of garment workers in the cloak, suit, and skirt industry in New York City in 1914 showed that while "no vocational diseases peculiar to garment workers" were found, the condition was "clearly suggested \* \* \* that the greatest number of poorly nourished, anemic tuberculous workers in an extremely seasonal industry were in that group composed of the lowest paid and the least regularly employed." (*Health of Garment Workers—The Relation of Economic Status to Health*, by B. S. Warren, surgeon, and T. de la Sydenstricker, public health statistician, with an introduction by J. W. Schereschewsky, surgeon, U. S. Public Health Reports, May 26, 1916, pp. 1298-1305, Reprint No. 341.) Reference may also be made to the recent reports of infant mortality studies conducted in various communities by the Children's Bureau of the U. S. Department of Labor; to the studies of John Robertson, M. D., in Birmingham, England; and to others.

## USE OF DYNAMITE IN ANTIMALARIAL DRAINAGE OPERATIONS.

By J. K. HOSKINS, Sanitary Engineer, U. S. Public Health Service, and W. E. HARDENBURG, Assistant Sanitary Engineer, U. S. Public Health Service.

In view of the present shortage of labor and the consequent high wages of laborers, considerable economies, both in the use of labor and in money outlay, may be effected in antimalarial drainage work by the use of dynamite, it has been demonstrated in the course of United States Public Health Service operations in the extra-cantonment zone at Camp Wheeler, Ga.

The best results were obtained in mucky areas where the mud was so deep and soft that hand excavation became slow and difficult. In these cases, the use of dynamite proved very satisfactory.

As an illustration of the savings effected by the use of dynamite, an analysis of the costs of two adjacent ditches in a large swamp in the extra-cantonment zone may be of interest.

Ditch No. 60 was excavated with dynamite. This ditch was 2,802 feet long, 12 feet wide at the top and 4 feet wide at the bottom, and averaged 5 feet deep. The number of cubic yards of material removed was 4,151.

Ditch No. 62 was excavated by laborers with picks and shovels. This ditch was 3,591 feet long, 4 feet wide and 3 feet deep. The yardage was 1,596.

The costs of excavating each ditch, not including clearing, were as follows:

	Ditch 60.	Ditch 62.
Cubic yards.....	4,151	1,596
Labor cost.....	\$308.90	\$671.75
Cost of material.....	\$1,265.10	\$38.75
Cost of excavation.....	\$1,574.00	\$710.50
Cost per cubic yard.....	\$0.39	\$0.45
Man days at \$3.....	103	224
Man days per cubic yard.....	0.024	0.140
Cubic yards per man day.....	41.66	7.14

The cost of excavation in the case of ditch 60 includes clearing out the ditch after it was dynamited. In the case of ditch 62 the cost of excavation includes the cost of a small quantity of dynamite used to facilitate the removal of large stumps.

It will be seen, therefore, that there was in this case a difference of 6 cents a cubic yard in favor of the use of dynamite. It is probable, however, that the cost of excavating ditch 60 by hand would have greatly exceeded 45 cents a cubic yard, owing to the very difficult nature of the soil—a mass of yielding mud, largely under water, in which it was almost impossible to stand up.

The great economy in the use of labor is also apparent from the above table, which indicates that with the aid of dynamite, one man accomplished nearly as much as six men using picks and shovels. The advantage of this, when labor is so badly needed, is obvious. The time saved by using explosives is also a valuable consideration in malarial control.

The method of using the dynamite was as follows: After the surface had been cleared, two rows of dynamite, about 2 feet apart, were planted in holes from 3 to 4 feet deep, the holes being spaced from 18 to 20 inches apart. A detonating cap and fuse were then connected near the middle of the section planted, and, by concussion, the whole area was exploded, excavating that section of the ditch in an instant.

The only men employed in blasting ditch 60 were two negro dynamite men and a couple of laborers who carried the material to them. After the blasting was completed a small gang was put to work removing the débris and raking out occasional ridges left in the bed of the ditch.

The method above described for use in wet swampy areas does not work satisfactorily in dry ground, since it is necessary that the earth be water-soaked in order that the concussion may explode the charges in the holes adjacent to the one fired by the fuse.

It was found that in cases where a smaller ditch was desired a single row of holes generally sufficed. For deep ditches in difficult ground, it may be necessary to use two-sticks to a hole. Experiment is necessary to determine the amount of explosive required for the soil through which ditches are to be excavated.

Another use to which dynamite was profitably put was in straightening out and deepening creek channels. In the Camp Wheeler extra-cantonment zone most of the creeks have a very tortuous course, and in order to eliminate pools by increasing the velocity of flow it was necessary to improve these channels. Dynamite was used in those cases in a similar manner to that described above, with very satisfactory results.

Explosives were also used very extensively in removing stumps, etc., encountered in excavating smaller ditches. A stick or two of dynamite exploded under a stump will save several hours of labor.

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### PREVALENCE AND TYPES OF MALARIA.

The United States Public Health Service, in cooperation with State health departments, is collecting data regarding the prevalence of malaria and the types of infection in certain States. Card forms are mailed to the physicians each month, and when these

cards are filled out and returned to the Public Health Service the data are compiled.

Summaries of the results of the investigation have been published in the Public Health Reports, April 5, 1918, pages 489-490; May 24, 1918, page 805; June 14, 1918, page 973; and July 26, 1918, page 1227.

The following table is a continuation of the tables already published:

*Summary of postal-card reports of malaria, 1918.*

	Maryland.				Oklahoma.				
	Mar.	Apr.	May.	June.	Apr.	May.	June.	July.	Aug.
Cards mailed.....	2,232	2,232	2,232	2,232	2,634	2,634	2,634	2,634	2,634
Cards returned unclaimed, out of practice, etc.....	6	4	3	4	7	2	6	5	7
Replies received.....	335	288	285	271	163	152	184	193	184
Percentage of replies received.....	15.05	12.92	12.78	12.16	6.20	5.77	7.00	7.34	7.00
Counties represented in replies.....	24	24	24	24	65	63	63	63	64
Counties not heard from.....					12	14	14	14	13
Towns or cities represented in replies.....	188	161	157	157	123	120	134	137	135
Cases of malaria reported:									
White.....	14	3	14	20	209	309	294	346	287
Colored.....	16	1	1	4	19	51	21	28	43
Color not stated.....			8				5	10	3
Total.....	30	4	23	24	228	360	320	384	333
Types of infection:									
Tertian.....	18	3	10	19	126	221	204	243	172
Quartan.....	7	1		1	27	46	19	30	24
Estivo-autumnal.....	4				28	40	31	43	64
Cases confirmed microscopically:									
Tertian.....	9		1	2	13	29	13	36	34
Quartan.....					1	2		7	
Estivo-autumnal.....	1				2	5	5	4	12
Cases reported confirmed, types not stated.....	1		9		26	21	19	8	4
Cases of hemoglobinuric fever.....							1		

	New Jersey.			Virginia.			Texas (eastern half).	
	June.	July.	August.	June.	July.	August.	July.	August.
Cards mailed.....	3,012	3,612	3,012	2,420	2,420	2,420	3,450	3,450
Cards returned unclaimed, out of practice, etc.....	35	38	39	5	7	6	107	71
Replies received.....	632	501	414	586	514	430	508	479
Percentage of replies received.....	21.23	16.84	13.92	24.22	21.30	17.81	15.19	14.17
Counties represented in replies.....	21	21	21	95	93	91	97	97
Counties not heard from.....				5	7	9	16	16
Towns or cities represented in replies.....	183	148	133	342	314	271	244	252
Cases of malaria reported:								
White.....	70	22	25	350	225	188	880	1,671
Colored.....	2	1		233	153	145	283	328
Color not stated.....		2		2	22	2	2	
Total.....	72	25	25	585	400	335	1,135	1,999
Types of infection:								
Tertian.....	69	19	21	376	207	200	549	453
Quartan.....	1	1		46	34	5	99	103
Estivo-autumnal.....		1		38	16	22	205	172
Cases confirmed microscopically:								
Tertian.....	10	6	5	49	20	35	94	79
Quartan.....	1				2	3	16	14
Estivo-autumnal.....		1		6	4	3	25	27
Cases reported confirmed, types not stated.....			1	28	5	7	75	20
Cases of hemoglobinuric fever.....							2	1



## ANTIVENEREAL CAMPAIGN MUST NOT RELAX.

The end of actual fighting in the world war does not lessen the necessity for the campaign against venereal diseases. Rather, it becomes a greater war emergency measure than ever. Cessation of hostilities centers attention on the return of the victorious American forces. On entering the service the men became subject to Army and Navy discipline, which, in the control of venereal diseases within the ranks, is rigid. Prior to demobilization, the tense fighting morale of the forces is bound to relax. The men will be buoyant in spirit and eager to celebrate. When mustered out they will return to conditions in civilian life which have been responsible for venereal disease. Many of them will contract it as a result. Unless all cases of venereal disease have proper treatment during the period of reconstruction, the scourge will reach alarming proportions. The time from now on is the most critical of all.

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## INTERSTATE SHIPMENT OF ADULTERATED MILK.

The contention of a dairy company, that adulterated milk which it had shipped from one State to itself in another State for treatment prior to sale was not an article of food as defined by the food and drugs act while in transit, was overruled in a decision of the Circuit Court of Appeals, Seventh Circuit.<sup>1</sup> The court held that in passing the act, Congress was endeavoring to protect the public by keeping out of commerce certain illicit articles, debased by adulteration, and that it would be an unjustifiable construction of the act to make liability turn upon a difference in identity of consignor and consignee, or the secret intent with which a shipper made the shipment.

The court also overruled the dairy company's contention that there could be no liability because it was not proved that the adulteration injured the milk. Section 7 of the act, it was stated, made it unnecessary to consider whether the addition of water in this case injuriously affected the quality or strength of the milk.

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<sup>1</sup> Decision Feb. 20, 1918, affirming conviction of the dairy company for violating the food and drugs act, reported 260 Fed. Rep., 231.

# PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

## UNITED STATES.

### EXTRA-CANTONMENT ZONES—CASES REPORTED WEEK ENDED NOV. 16.

CAMP BEAUREGARD ZONE, LA.		CAMP DODGE ZONE, IOWA—continued.	
Alexandria:	Cases.	Scarlet fever:	Cases.
German measles.....	1	Des Moines.....	9
Gonorrhea.....	1	Polk City.....	1
Influenza.....	24	Smallpox:	
Tuberculosis.....	1	Des Moines.....	2
Typhoid fever.....	1		
Pineville:		CAMP DONIPHAN ZONE, OKLA.	
Influenza.....	1	Gonorrhea:	
Bural district:		Iawton.....	3
Influenza.....	8	Influenza:	
		Comanche County.....	5
CAMP BOWIE ZONE, TEX.		CAMP EBERTS ZONE, ARK.	
Fort Worth:		Diphtheria:	
Chancreid.....	4	Carlisle.....	1
Chicken pox.....	9	England.....	1
Diphtheria.....	5	Gonorrhea:	
Gonorrhea.....	8	Lono'e.....	1
Influenza.....	38	Influenza:	
Pneumonia.....	18	Cabot.....	1
Scarlet fever.....	1	Carlisle, route 3.....	1
Smallpox.....	1	Coy.....	1
Syphilis.....	2	England.....	16
Tuberculosis.....	1	England, R. F. D.....	41
Typhoid fever.....	3	England, route 2.....	5
		Keo.....	9
BREMERTON ZONE, WASH.		Lono'e.....	1
Influenza.....	46	Lono'e, R. F. D.....	2
Mumps.....	2	Lono'e, route 1.....	7
CHARLESTON SANITARY DISTRICT, S. C.		Scott.....	1
Influenza.....	70	Scott, R. F. D.....	1
		Scott, route 1.....	9
CAMP DEVENS ZONE, MASS.		Tomberlin.....	4
Influenza:		Ward, R. F. D.....	19
Lancaster.....	24	Malaria:	
		Keo.....	3
CAMP DIX ZONE, N. J.		Tomberlin.....	2
Influenza:		Mumps:	
New Hanover Township.....	2	Cabot.....	1
		Pneumonia:	
CAMP DODGE ZONE, IOWA.		England.....	1
Diphtheria:		Lono'e.....	1
Des Moines.....	8	Lono'e, R. F. D.....	3
Influenza:		Lono'e, route 1.....	1
Des Moines.....	23	Scott, route 1.....	3
Grimes.....	6	Ward.....	1
Polk City.....	11		

## CAMP EBERTS ZONE, ARK.—continued.

Pneumonia, lobar:	Cases.
Scott, R. F. D.....	1
Syphilis:	
Lonoke.....	1
Scott.....	1
Tuberculosis:	
England.....	1
Pettus.....	1
Typhoid fever:	
Quitman.....	1
Whooping cough:	
Scott, route 1.....	1

## CAMP FUNSTON ZONE, KANS.

Carcinoma:	
Manhattan.....	1
Chicken pox:	
Junction City.....	1
Manhattan.....	1
Gonorrhea:	
Junction City.....	7
Influenza:	
Bala.....	1
Junction City.....	26
Manhattan.....	41
Millford.....	10
Ogden.....	8
Pottawatomie County.....	1
Randolph.....	1
Rocky Ford.....	10
Wakesfield.....	1
Measles:	
Manhattan.....	1
Mumps:	
Junction City.....	2
Pneumonia:	
Junction City.....	2
Manhattan.....	6
Scarlet fever:	
Manhattan.....	1

## GAS AND FLAME SCHOOL ZONE, GA. AND ALA.

Diphtheria:	
Columbus.....	1
Gonorrhea:	
Columbus.....	1
Girard.....	1
Muskegee County.....	1
Influenza:	
Bibb City.....	8
Columbus.....	137
Girard.....	31
Muskegee County.....	55
Phenix City.....	2
Pellagra:	
Columbus.....	1
Pneumonia:	
Columbus.....	11
Muskegee County.....	4
Phenix City.....	2
Smallpox:	
Girard.....	2
Syphilis:	
Columbus.....	1
Typhoid fever:	
Columbus.....	1

## GAS AND FLAME SCHOOL ZONE, GA. AND ALA.—continued.

Whooping cough:	Cases.
Columbus.....	3
Muskegee County.....	1

## GERSTNER FIELD ZONE, LA.

Gonorrhea.....	1
Influenza.....	174
Malaria.....	2
Pneumonia.....	12
Scarlet fever.....	1
Typhoid fever.....	9

## CAMP GORDON ZONE, GA.

Atlanta:	
Diphtheria.....	3
Gonorrhea.....	6
Influenza.....	124
Scarlet fever.....	4
Smallpox.....	2
Syphilis.....	7
Tuberculosis.....	16
Typhoid fever.....	1

## CAMP GREENE ZONE, N. C.

Charlotte Township:	
Diphtheria.....	1
Gonorrhea.....	9
Influenza.....	52
Mumps.....	1
Scarlet fever.....	2
Smallpox.....	2
Syphilis.....	9
Tuberculosis.....	3

## GULFPORT HEALTH DISTRICT, MISS.

Diphtheria.....	3
Gonorrhea.....	4
Hookworm.....	5
Influenza.....	227
Malaria.....	9
Mumps.....	5
Pneumonia.....	3
Syphilis.....	1
Tuberculosis.....	3
Typhoid fever.....	1

## CAMP HANCOCK ZONE, GA.

Augusta:	
Chaneroid.....	1
Diphtheria.....	2
Influenza.....	226
Pneumonia.....	6
Scarlet fever.....	1
Typhoid fever.....	1
Richmond County:	
Influenza.....	33

## CAMP JACKSON ZONE, S. C.

Columbia:	
Diphtheria.....	1
Influenza.....	18
Scarlet fever.....	1
Typhoid fever.....	1
United States Government Clinic:	
Gonorrhea.....	3
Syphilis.....	7

## CAMP JOSEPH E. JOHNSON ZONE, FLA.

Jacksonville:	Cases.
Chancroid.....	1
Diphtheria.....	1
Diphtheria carrier.....	1
Gonorrhea.....	20
Malaria.....	2
Measles.....	1
Ophthalmia.....	1
Syphilis.....	10
Trachoma.....	1
Tuberculosis.....	1
Typhoid fever.....	1
Prison Farm:	
Syphilis.....	7

## FORT LEAVENWORTH ZONE, KANS.

Chicken pox:	
Leavenworth County.....	1
Diphtheria:	
Leavenworth.....	1
Gonorrhea:	
Leavenworth.....	7
Influenza:	
Leavenworth.....	104
Leavenworth County.....	14
Scarlet fever:	
Leavenworth.....	1

## CAMP LEN ZONE, VA.

Petersburg:	
Gonorrhea.....	3
Tuberculosis.....	1

## CAMP LEWIS ZONE, WASH.

Chicken pox:	
Parkland.....	1
Spanaway.....	1
Influenza:	
American Lake.....	2
Collin Addition.....	6
Green Lake.....	6
In Leslie.....	2
Lakewood.....	5
Loveland.....	1
Parkland.....	3
Roy.....	5
Spanaway.....	1
Steilacoom Lake.....	1

## CAMP LOGAN ZONE, TEX.

Houston:	
Chancroid.....	1
Diphtheria.....	5
Gonorrhea.....	4
Syphilis.....	2
Tuberculosis.....	3
Typhoid fever.....	2
United States Government Clinic:	
Chancroid.....	6
Gonorrhea.....	20
Syphilis.....	8

## CAMP M'ARTHUR ZONE, TEX.

Waco:	Cases.
Chicken pox.....	1
Diphtheria.....	2
Gonorrhea.....	17
Influenza.....	10
Pneumonia.....	7
Syphilis.....	1
Tuberculosis.....	2

## CAMP M'CLELLAN ZONE, ALA.

Gonorrhea:	
Anniston.....	10
Influenza:	
Anniston.....	30
Blue Mountain.....	185
Precinct 4.....	2
Precinct 15.....	2
Pneumonia:	
Blue Mountain.....	4
Syphilis:	
Anniston.....	2
Whooping cough:	
Anniston.....	2

## NEW LONDON SANITARY DISTRICT, CONN.

Diphtheria:	
Mystic.....	1
Old Mystic.....	1
Stonington.....	2
Gonorrhea:	
New London.....	2
Voluntown.....	2
Influenza:	
Groton (borough).....	27
Groton (town).....	10
New London.....	11
Old Lyme.....	4
Stonington.....	11
Waterford.....	2
Pneumonia:	
Groton (borough).....	2
Groton (town).....	2
New London.....	5
Stonington.....	1
Scarlet fever:	
Groton (borough).....	2
Tuberculosis:	
New London.....	2

## FORT OGLETHORPE ZONE, GA. AND TENN.

Chicken pox:	
Chattanooga.....	1
Gonorrhea:	
Chattanooga.....	2
Influenza:	
Chattanooga.....	1
Eastlake.....	4
North Chattanooga.....	2
Rossville, Ga.....	4
Mumps:	
Chattanooga.....	1
Scarlet fever:	
North Chattanooga.....	1
Syphilis:	
Chattanooga.....	2

## PICRIC ACID PLANT ZONE, GA.

Brunswick:	Cases.
Diphtheria.....	1
Influenza.....	14
Pneumonia.....	6

## CAMP PIKE ZONE, ARK.

Little Rock:	Cases.
Chancroid.....	4
Diphtheria.....	1
Gonorrhea.....	14
Influenza.....	64
Measles.....	4
Mumps.....	1
Pellagra.....	1
Pneumonia.....	9
Scarlet fever.....	1
Syphilis.....	2
Tuberculosis.....	2
Typhoid fever.....	2
Whooping cough.....	1

North Little Rock:	Cases.
Gonorrhea.....	4
Influenza.....	9
Malaria.....	2
Measles.....	1

Pieron:	Cases.
Influenza.....	1
Rural district:	Cases.
Influenza.....	2

## CAMP POLK ZONE, N. C.

Durham:	Cases.
Influenza.....	41
Typhoid fever.....	2
Durham County:	Cases.
Diphtheria.....	2
Influenza.....	20
Scarlet fever.....	1

Raleigh:	Cases.
Influenza.....	201
Whooping cough.....	4

## PORTSMOUTH AND NORFOLK COUNTY HEALTH DISTRICT, VA.

Chancroid:	Cases.
Norfolk.....	1
Diphtheria:	Cases.
Ocean View.....	1
Port Norfolk.....	4
South Norfolk.....	1
Gonorrhea:	Cases.
Norfolk.....	10
Portsmouth.....	1
Influenza:	Cases.
Norfolk County.....	1
Portsmouth.....	5
South Norfolk.....	1
Syphilis:	Cases.
Norfolk.....	6

## PORTSMOUTH-HITTERY SANITARY DISTRICT, N. H. AND ME.

Diphtheria:	Cases.
Portsmouth.....	1

## CAMP SEVIER ZONE, S. C.

Greenville:	Cases.
Diphtheria.....	1
Influenza.....	4
Tuberculosis.....	1

## CAMP SHELBY ZONE, MISS.

Hattiesburg:	Cases.
Diphtheria.....	3
Influenza.....	5
Measles.....	1
Mumps.....	1
Whooping cough.....	6
Near Hattiesburg:	Cases.
Diphtheria.....	1
Influenza.....	1

## CAMP SHERIDAN ZONE, ALA.

Montgomery:	Cases.
Diphtheria.....	2
Influenza.....	32
Mumps.....	1
Tuberculosis, pulmonary.....	1
Typhoid fever.....	1
Whooping cough.....	2
United States Government Clinic:	Cases.
Chancroid.....	5
Gonorrhea.....	12
Syphilis.....	4

## CAMP SHERMAN ZONE, OHIO.

Chicken pox:	Cases.
Huntington Township.....	1
Diphtheria:	Cases.
Chillicothe.....	2
Colerain Township.....	2
Gonorrhea:	Cases.
United States Government Clinic.....	5
Influenza:	Cases.
Chillicothe.....	23
Ross County.....	15
Measles:	Cases.
Chillicothe.....	1
Mumps:	Cases.
Liberty Township.....	3
Pneumonia, broncho:	Cases.
Chillicothe.....	4
Syphilis:	Cases.
United States Government Clinic.....	1

## CAMP ZACHARY TAYLOR ZONE, KY. AND IND.

Chicken pox:	Cases.
New Albany.....	1
Diphtheria:	Cases.
Jefferson County.....	1
Louisville.....	6
Gonorrhea:	Cases.
Louisville.....	1
United States Government Clinic.....	18
Veneral clinic, county jail.....	20
Influenza:	Cases.
Clark County.....	69
Jefferson County.....	89
Jeffersonville.....	71
Louisville.....	175
New Albany.....	50
Mumps:	Cases.
Louisville.....	1
Pneumonia:	Cases.
Louisville.....	1
New Albany.....	1

## CAMP ZACHARY TAYLOR ZONE, KY. AND IND.—CON.

Syphilis:	Cases.
United States Government Clinic.....	16
Veneral clinic, county jail.....	10
Tuberculosis, pulmonary:	
Jefferson County.....	1
Louisville.....	5

## TIDEWATER HEALTH DISTRICT, VA.

Newport News:	
Cerebrospinal meningitis.....	1
Diphtheria.....	4
Gonorrhea.....	4
Malaria.....	1
Scarlet fever.....	1
Syphilis.....	1

## CAMP TRAVIS ZONE, TEX.

San Antonio:	
Chancroid.....	3
Gonorrhea.....	1
Diphtheria.....	1
Gonorrhea.....	11
Influenza.....	124
Pneumonia.....	3
Syphilis.....	5
Tuberculosis.....	2
Typhoid fever.....	2

## CAMP UPTON ZONE, N. Y.

Diphtheria.....	3
Pneumonia.....	3

## VANCOUVER ZONE, WASH.

Diphtheria.....	7
Influenza.....	47
Smallpox.....	2

## CAMP WADSWORTH ZONE, S. C.

Roebuck Road:	Cases.
Influenza.....	3
Saxon:	
Influenza.....	1
Spartanburg:	
Gonorrhea.....	16
Influenza.....	106
Measles.....	1
Syphilis.....	1
Tuberculosis.....	2

## CAMP WHEELER ZONE, GA.

Bibb County:	
Influenza.....	55
East Macon:	
Influenza.....	29
Mumps.....	1
Macon:	
Diphtheria.....	6
Gonorrhea.....	1
Influenza.....	133
Mumps.....	1
Pneumonia.....	1
Scarlet fever.....	2
Syphilis.....	1

## WILMINGTON SANITARY DISTRICT, N. C.

East Wilmington:	
Diphtheria.....	3
Wilmington:	
Gonorrhea.....	2
Syphilis.....	1
Tuberculosis.....	5
Typhoid fever.....	1

DISEASE CONDITIONS AMONG TROOPS IN THE UNITED STATES.<sup>1</sup>

The following data are taken from telegraphic reports received in the office of the Surgeon General of the United States Army for the week ended November 8, 1918:

Annual admission rate per 1,000 (disease only):		Divisional camps.....	67.59
All troops.....	1,201.2	Cantonments.....	60.54
Divisional camps.....	1,163.3	Departmental and other troops.....	47.29
Cantonments.....	1,237.2	Annual death rate per 1,000 (disease only):	
Departmental and other troops.....	1,023.7	All troops.....	23.05
Noneffective rate per 1,000 on day of report:		Divisional camps.....	61.29
All troops.....	56.82	Cantonments.....	16.09
		Departmental and other troops.....	37.13

<sup>1</sup> Including Porto Rico.

## Cases of special diseases reported during the week ended Nov. 8, 1918.

Camp.	Pneumonia.	Dysentery.	Malaria.	Venereal diseases.		Influenza.	Measles.	Measles.	Scarlet fever.	Deaths.	Annual admission rate per 1,000 (disease only).	Noneffective per 1,000 on day of report.
				Total.	New infections.							
Beauregard.....	2		10	22	0	101	7			5	1,720.5	82.75
Bowie.....	111			366	2	194				31	4,090.6	94.17
Coily.....				7	0	223			6	94	1,511.8	153.38
Forrest.....	166					50	7			51	3,636.8	93.93
Fremont.....	8			4	3	6	5			4	943.8	113.9
Greene.....	24			273	0	54	10	3		20	1,370.2	60.29
Greenleaf.....	22			7	0	48	4			5	1,170.0	54.66
Hancock.....	25			61	4	3	38		51	28	602.1	60.3
Kearny.....	160			25	3	571				23	2,277.6	59.2
Logan.....	1		4	26	0	91	2			1	1,246.2	49.31
MacArthur.....	3			24	15	37	35			3	640.7	73.03
McClellan.....	26			37	0	189	26	3		14	1,106.1	54.59
Sevier.....	10		2	25	8	21	10	3		4	1,024.8	49.90
Shelby.....	86			6	6	188	5			21	1,802.3	157.10
Sheridan.....	51			12	5	46	15			17	780.5	44.26
Syracuse.....						5				0	2,000.6	26.70
Wadsworth.....	96			100	9	42			1	5	1,613.0	74.41
Wheeler.....	125			63	0	2				35	2,541.9	63.06
Custer.....	19			22	2	37			1	6	449.4	38.36
Devens.....	25			41	6	20	24			2	694.1	41.19
Dix.....	56		1	2,686	1	21	2			2	5,961.7	50.93
Dodge.....	8			36	3	78	30	1		13	1,036.5	107.31
Eustis.....	57		3	310	0	116	1		1	17	2,335.4	61.04
Funston.....	20			37	3	69	73			9	514.4	40.56
Gordon.....	20		1	18	0	111	13	1	2	7	1,661.7	76.73
Grant.....	9			10	0	8	2	1	14	12	454.3	39.30
Humphreys.....	6			12	2	34	11			5	609.1	36.14
Jackson.....	11			43	0	36	47	1		5	622.7	59.73
J. E. Johnston.....	132		1	74	0	9	11			3	901.1	37.82
Las Casas.....	232			1	0	120				29	3,075.29	107.75
Lee.....	4		1	28	0	114	5			7	694.0	47.39
Lewis.....	80			60	8	267	28	3	2	13	2,629.6	111.89
Meade.....	18		1	71	5	33	40			10	804.1	26.56
Pike.....	10		1	8	1	81	113		1	13	1,483.9	64.56
Sherman.....	10			15	0	9	37			7	823.6	60.77
Taylor.....	34			29	2	103	80	8	3	20	1,148.0	73.75
Travis.....	124			29	5	162				18	1,725.6	124.51
Upton.....	26			49	1	60	7			5	502.5	45.45
Northeastern Department.....	9		1	16	13	86				11	1,163.3	42.78
Eastern Department.....	17			46	6	330	8			21	714.2	39.39
Southeastern Department.....	106		13	64	43	774	3			28	2,240.3	49.90
Southern Department.....	113		1	66	5	400	1			47	1,190.0	50.60
Central Department.....	24					185				25	1,190.4	38.26
Western Department.....	134			21	0	347	1	1	5	108	2,171.1	90.19
Aviation camps.....	105		1	3	111	6	719	5	1	51	1,269.1	52.66
Port of embarkation:												
Hoboken.....	25		1	39	12	320	92		2	27	1,164.9	97.24
Newport News.....	17		2	38	2	91	66			5	1,411.2	116.27
Alcatraz Disciplinary Barracks.....										0	735.6	20.28
Leavenworth Disciplinary Barracks.....									2	3	1,250.4	54.44
Jefferson Barracks.....	4			2	1	12	3			2	1,533.2	109.60
Columbus Barracks.....	1			5	3	2				1	581.3	40.16
Fort Logan.....	1			1	1	6				1	1,261.3	78.24
Fort McDowell.....	1			5	1					1	545.1	59.41
Fort Sill.....				30	30	48			1	7	537.0	35.68
Fort Slocum.....				3	0	8				1	287.7	30.93
Fort Thomas.....						7				1	231.3	23.19
West Point.....										0	786.3	21.42
Arsenals.....	3		2	11	2	30				5	757.3	37.11
Miscellaneous installations.....	4					15				1	484.6	11.98
Students' Army Training Corps.....	12			9	0	115			1	15	1,417.1	25.74
General hospitals.....										73		
Total.....	2,392	8	47	5,119	213	6,887	867	26	98	1,002	1,201.2	56.82

## Annual rate per 1,000 for special diseases.

Disease.	All troops in United States. <sup>1</sup>	Depart- mental and other troops. <sup>1</sup>	Divisional camps. <sup>1</sup>	Canton- ments. <sup>1</sup>	Expedi- tionary forces. <sup>2</sup>
Pneumonia.....	81.08	50.71	158.14	72.87	56.73
Dysentery.....	16	35	.....	.08	3.78
Malaria.....	1.59	2.02	2.76	.64	.42
Veneral.....	173.22	41.18	182.65	289.96	21.59
Paratyphoid.....	.....	.....	.....	.....	.31
Typhoid.....	10	.08	.34	.....	.14
Measles.....	29.38	15.78	28.31	42.38	10.26
Meningitis.....	.88	.17	1.55	1.21	3.28
Scarlet fever.....	3.32	1.32	10.01	2.02	1.19
Influenza.....	233.45	313.09	322.67	118.73	.....

<sup>1</sup> Week ended Nov. 8, 1918.<sup>2</sup> Week ended Oct. 31, 1918.

Annual death rate (disease only) all troops in United States and American Expeditionary Forces,  
France, for the week ending Nov. 1, 1918..... 31.83

## CURRENT STATE SUMMARIES.

## Telegraphic Reports for Week Ended Nov. 16, 1918.

*Arkansas.*—Influenza: Harrison 113, Pangburn 225, Rogers 150 cases (deaths 1, pneumonia), Foreman 137 cases (deaths, 1 influenza, 1 pneumonia), Garland County 93, Randolph County 85 cases (deaths 5, pneumonia), Helena 53, Van Buren 45 cases (deaths 4, pneumonia), Gentry 38, Conway County 34, Huttig 55 cases (deaths 1), Paragould 50, Miller County 38, Augusta 25 cases (deaths 6, pneumonia), Bradley County 32, Warren 19, Shirley 20, Dermott 10, Melbourne 20, Columbia County 18, Hempstead County 16, Morrilton 15, Calico Rock 2 cases (death 1, pneumonia), Hazen—rural—100 cases (deaths 2, pneumonia), Faulkner County 6, Lake Village 3, West Fork 7, Marianna 3, Izard 4. Hempstead County: Smallpox 3. Drew: Measles 1, pellagra 2, tuberculosis 2. Jefferson: Malaria 1, tuberculosis 1. Helena: Malaria 14, pellagra 2, scarlet fever 1, tuberculosis 2. Conway: Typhoid 4. Foreman: Malaria 2, tuberculosis 3. Faulkner County: Malaria 4, diphtheria 1, pellagra 1, tuberculosis 2. Decatur: Typhoid 1. Stephens: Pellagra 1. Warren: Malaria 14, pellagra 2, tuberculosis 2. Bradley County: Malaria 4, tuberculosis 1, typhoid 3, diphtheria 1, whooping cough 1, Huttig: Malaria 2, whooping cough 1. Mansfield: Typhoid 1, smallpox 1. Influenza again becoming epidemic in number of localities where formerly light; will be some time before able to check up deaths. Coal Hill: Delayed influenza reports 1,100 cases; total deaths 15.

*California.*—Total cases influenza in State to November 16, 150,615. Total cases for week ended November 16, 9,791. Seven cases smallpox; 1 Richmond, 2 Contra Costa County, 2 Palo Alto, 2 Oakland. Two cases poliomyelitis; 1 Huntington Park, 1 Lakeport. One epidemic cerebrospinal meningitis Long Beach.



**Connecticut.**—Meningitis: New Haven 1. Poliomyelitis: New Haven 1.

**Illinois.**—Diphtheria: 164, of which in Chicago 119. Scarlet fever: 51, of which in Chicago 21. Smallpox: 11. Influenza: 8,041 Springfield, poliomyelitis 1.

**Indiana.**—Influenza: 1,591. Syphilis: 11. Gonorrhea: 24. Chancroid 3.

**Iowa.**—Chancroid: Cedar Rapids 1, Marshalltown 6, Sioux City 1, Vincent 1, Waterloo 1. Chicken pox: Dubuque 1. Diphtheria: Davenport 2, Des Moines 9, Dubuque 1, Joice 1, Ottumwa 3, South Fort Des Moines 1. Gonorrhea: Carroll 13, Cedar Rapids 4, Council Bluffs 2, Glidden 3, Iowa City 1, Jolley 1, Marshalltown 40, Muscatine 1, Newton 1, Salix 1, Sioux City 3, Spencer 1, Vincent 2, Waterloo 85, Whiting 2. Scarlet fever: Baxter 1, Burlington 2, Cedar Rapids 1, Davenport 1, Des Moines 8, Forest City 1, Fort Dodge 1, Minerva 2, Ottumwa 1, Seymour 1. Smallpox: Burlington 12, Cedar Rapids 1, Council Bluffs 3, Des Moines 4, Ottumwa 1. Syphilis: Carroll 5, Cedar Rapids 1, Clermont 1, Des Moines 1, Marshalltown 15, Sioux City 3, Waterloo 39. Typhoid fever: Avoca 1. Whooping cough: Forest City 1. In rural districts of following counties. Diphtheria: Audubon 1, Jasper 3, Kossuth 2. Gonorrhea: Washington 1. Poliomyelitis: Monona 1. Scarlet fever: Hancock 11, Jasper 2, Marshall 1, Polk 2. Smallpox: Cherokee 3, Floyd 1, Jasper 2, Woodbury 1. Syphilis: Washington 1. For entire State: Influenza 3,279 cases.

**Kansas.**—Meningitis: Eldorado 1. State totals: Typhoid 22, smallpox 13, diphtheria 39, scarlet fever 9, influenza 6,080, lobar pneumonia 86.

Reported by mail for preceding week (ended November 9):

Chicken pox.....	16	Pneumonia (lobar).....	156
Diphtheria.....	21	Poliomyelitis.....	2
German measles.....	1	Scarlet fever.....	30
Gonorrhea.....	18	Septic sore throat.....	1
Influenza.....	8,924	Smallpox.....	9
Influenzal meningitis.....	1	Syphilis.....	18
Measles.....	4	Tuberculosis.....	26
Mumps.....	11	Typhoid fever.....	26
Pellagra.....	1	Whooping cough.....	82

**Maine.**—Diphtheria: Portland 1, Winthrop 7, Eastbrook 3, Bangor 1, Woodstock 1, Livermore 1. Gonorrhea: Lewiston 2. Scarlet fever: Portland 2, Canton 1. Smallpox: Island Falls 2. Syphilis: Lewiston 1. Tuberculosis: 3 cases reported. Influenza: 494 scattered cases.

**Massachusetts.**—Unusual prevalence. Diphtheria: Lowell 9, Somerville 15, Southbridge 3. Lobar pneumonia: Haverhill 10, Springfield 22. Scarlet fever: Salem 6. Smallpox: Gloucester 1.

**Minnesota.**—Smallpox (new foci): Bigstone County, Ortonville village, 1; Clay County, Hawley village, 1; Mower County, Austin city, 1. One poliomyelitis reported since November 11. Week ended November 10: Syphilis 85, gonorrhea 81, chancroid 4. Week ended November 17: Syphilis 31, gonorrhea 60, chancroid 2.

**New Jersey.**—No outbreak nor unusual prevalence.

**New York.**—Outside of New York City. Diphtheria 95, of which in Buffalo 33. Scarlet fever 93, of which in Ithaca 20. Pneumonia decreasing. Voluntary reports: Syphilis 76, gonorrhea 90.

**North Carolina.**—Whooping cough 63, measles 12, diphtheria 39, scarlet fever 21, septic sore throat 2, smallpox 11, chicken pox 3, typhoid 22, ophthalmia neonatorum 1.

**Ohio.**—Smallpox: 10 additional cases, Hamilton. Scarlet fever: 12 Burton Township (Geauga County). Venereal diseases: 53 cases for State.

**Vermont.**—No outbreak or unusual prevalence.

**Virginia.**—Two cases smallpox, Rockingham County. Two hundred and twenty-nine cases influenza.

**Washington.**—No unusual outbreak of disease. Influenza: Adams County 37 cases, Chelan 107, Garfield 51, Grays Harbor 260, Kitsap 46, Walla Walla 138, Ferry 51. Seattle epidemic practically at an end.

### CEREBROSPINAL MENINGITIS.

#### State Reports for September and October, 1918.

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas (September):</b>		<b>Massachusetts (October) Continued.</b>	
Riley County—		Middlesex County.....	8
Manhattan.....	1	Cambridge.....	2
Wilson County—		Natick (town).....	1
Chanute (R. D.).....	1	Watertown (town).....	1
Total.....	2	<b>Suffolk County—</b>	
<b>Massachusetts (October):</b>		Boston.....	8
Bristol County—		Chelsea.....	4
Fall River.....	1	Total.....	32
Mansfield (town).....	1	<b>Montana (October):</b>	
<b>Essex County—</b>		Big Horn County.....	1
Andover (town).....	1	<b>Washington (September):</b>	
Boxford (town).....	1	King County—	
Lawrence.....	1	Seattle.....	1
<b>Franklin County—</b>		<b>Pierce County—</b>	
Greenfield (town).....	1	Tacoma.....	1
<b>Hampden County—</b>		Total.....	
Chicopee.....	1		
Springfield.....	1		

**CEREBROSPINAL MENINGITIS—Continued.****City Reports for Week Ended Nov. 2, 1918.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....	2	2	New Orleans, La.....	2	2
Boston, Mass.....	1	.....	Newport, Ky.....	1	1
Bridgeport, Conn.....	1	.....	New York, N. Y.....	8	.....
Burlington, Iowa.....	1	.....	Philadelphia, Pa.....	1	.....
Chicago, Ill.....	2	1	Pittsfield, Mass.....	.....	4
Cincinnati, Ohio.....	1	.....	Racine, Wis.....	.....	1
Cleveland, Ohio.....	1	.....	St. Louis, Mo.....	2	.....
Louisville, Ky.....	.....	1	Springfield, Mass.....	1	.....
Milwaukee, Wis.....	2	2	Springfield, Ohio.....	1	.....
Minneapolis, Minn.....	1	.....	Superior, Wis.....	.....	1
Nashville, Tenn.....	1	.....	Utica, N. Y.....	.....	1
Newark, N. J.....	.....	1			

**CHANCROID.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

Cases.	Cases.
Camp Bowie zone, Tex.....	4
Camp Hancock zone, Ga.....	1
Camp Joseph E. Johnston zone, Fla.....	1
Camp Logan zone, Tex.....	7
Camp Pike zone, Ark.....	4
Portsmouth and Norfolk County health district, Va.....	1
Camp Sheridan zone, Ala.....	5
Camp Travis zone, Tex.....	3

**DIPHTHERIA.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

Cases.	Cases.
Camp Bowie zone, Tex.....	5
Camp Dodge zone, Iowa.....	8
Camp Eberts zone, Ark.....	2
Gas and Flame School zone, Ga. and Ala.....	1
Camp Gordon zone, Ga.....	3
Camp Greene zone, N. C.....	1
Gulfport health district, Miss.....	3
Camp Hancock zone, Ga.....	2
Camp Jackson zone, S. C.....	1
Camp Joseph E. Johnston zone, Fla.....	1
Fort Leavenworth zone, Kans.....	1
Camp Logan zone, Tex.....	5
Camp MacArthur zone, Tex.....	2
New London sanitary district, Conn.....	4
Picric acid plant zone, Ga.....	1
Camp Pike zone, Ark.....	1
Camp Polk zone, N. C.....	2
Portsmouth and Norfolk County health district, Va.....	6
Portsmouth-Kittery sanitary district, N. H. and Me.....	1
Camp Sevier zone, S. C.....	1
Camp Shelby zone, Miss.....	4
Camp Sheridan zone, Ala.....	2
Camp Sherman zone, Ohio.....	4
Camp Zachary Taylor zone, Ky. and Ind.....	7
Tidewater health district, Va.....	4
Camp Travis zone, Tex.....	1
Camp Upton zone, N. Y.....	3
Vancouver zone, Wash.....	7
Camp Wheeler zone, Ga.....	6
Wilmington sanitary district, N. C.....	2

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 2076.

**ERYSIPELAS.****City Reports for Week Ended Nov. 2, 1918.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Buffalo, N. Y.....	3	.....	Northampton, Mass.....	.....	2
Chicago, Ill.....	12	2	Omaha, Nebr.....	1	.....
Cleveland, Ohio.....	3	.....	Passaic, N. J.....	1	.....
Detroit, Mich.....	1	.....	Philadelphia, Pa.....	4	1
East Orange, N. J.....	1	.....	Pontiac, Mich.....	1	.....
Elgin, Ill.....	1	.....	Portland, Oreg.....	2	.....
Indianapolis, Ind.....	.....	1	Providence, R. I.....	.....	1
Jackson, Mich.....	.....	1	St. Louis, Mo.....	1	.....
Kansas City, Kans.....	1	.....	Springfield, Ill.....	1	.....
Minneapolis, Minn.....	1	.....	Syracuse, N. Y.....	.....	1
Montclair, N. J.....	1	.....	Trenton, N. J.....	.....	1
Newark, N. J.....	3	.....	Wichita, Kans.....	1	.....
New York, N. Y.....	.....	1			

**GONORRHEA.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

Cases.		Cases.	
Camp Beauregard zone, La.....	1	Camp MacArthur zone, Tex.....	17
Camp Bowie zone, Tex.....	8	Camp McClellan zone, Ala.....	10
Camp Doniphan zone, Okla.....	2	New London sanitary district, Conn.....	4
Camp Eberts zone, Ark.....	1	Fort Oglethorpe zone, Ga. and Tenn.....	2
Camp Funston zone, Kans.....	7	Camp Pike zone, Ark.....	18
Gas and Flame School zone, Ga. and Ala.....	3	Portsmouth and Norfolk County health district, Va.....	11
Gerstner Field zone, La.....	1	Camp Sheridan zone, Ala.....	12
Camp Gordon zone, Ga.....	6	Camp Sherman zone, Ohio.....	5
Camp Greene zone, N. C.....	9	Camp Zachary Taylor zone, Ky. and Ind.....	39
Gulfport health district, Miss.....	4	Tidewater health district, Va.....	4
Camp Jackson zone, S. C.....	3	Camp Travis zone, Tex.....	11
Camp Joseph E. Johnston zone, Fla.....	20	Camp Wadsworth zone, S. C.....	16
Fort Leavenworth zone, Kans.....	7	Camp Wheeler zone, Ga.....	1
Camp Lee zone, Va.....	3	Wilmington sanitary district, N. C.....	2
Camp Logan zone, Tex.....	33		

**INFLUENZA.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

Cases.		Cases.	
Camp Beauregard zone, La.....	33	Camp MacArthur zone, Tex.....	10
Camp Bowie zone, Tex.....	38	Camp McClellan zone, Ala.....	229
Bremerton zone, Wash.....	46	New London sanitary district, Conn.....	66
Charleston sanitary district, S. C.....	70	Fort Oglethorpe zone, Ga. and Tenn.....	11
Camp Devens zone, Mass.....	24	Ficric Acid Plant zone, Ga.....	14
Camp Dix zone, N. J.....	2	Camp Pike zone, Ark.....	76
Camp Dodge zone, Iowa.....	40	Camp Polk zone, N. C.....	262
Camp Doniphan zone, Okla.....	5	Portsmouth and Norfolk County health district, Va.....	7
Camp Eberts zone, Ark.....	118	Camp Sevier zone, S. C.....	4
Camp Funston zone, Kans.....	94	Camp Shelby zone, Miss.....	6
Gas and Flame School zone, Ga. and Ala.....	233	Camp Sheridan zone, Ala.....	32
Gerstner Field zone, La.....	174	Camp Sherman zone, Ohio.....	38
Camp Gordon zone, Ga.....	124	Camp Zachary Taylor zone, Ky. and Ind.....	464
Camp Greene zone, N. C.....	52	Camp Travis zone, Tex.....	124
Gulfport health district, Miss.....	227	Vancouver zone, Wash.....	47
Camp Hancock zone, Ga.....	259	Camp Wadsworth zone, S. C.....	112
Camp Jackson zone, S. C.....	13	Camp Wheeler zone, Ga.....	257
Fort Leavenworth zone, Kans.....	118		
Camp Lewis zone, Wash.....	32		

**LEPROSY.****City Reports for Week Ended Nov. 2, 1918.**

During the week ended November 2, 1918, there were reported two cases of leprosy; one at Boston, Mass., and one at Galveston, Tex.

**MALARIA.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

Cases.		Cases.	
Camp Eberts zone, Ark.....	5	Camp Joseph E. Johnston zone, Fla.....	2
Gerstner Field zone, La.....	2	Camp Pike zone, Ark.....	2
Gulfport health district, Miss.....	9	Tidewater health district, Va.....	1

**MALARIA—Continued.****State Reports for September and October, 1918.**

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas (September):</b>		<b>Massachusetts (October):</b>	
Wilson County.....	2	Franklin County.....	8
New Albany.....		Erving (town).....	
Wyandotte County.....	2	Middlesex County.....	1
Kansas City.....		Natick (town).....	
<b>Total.....</b>	<b>4</b>	<b>Total.....</b>	<b>4</b>

**City Reports for Week Ended Nov. 2, 1918.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Ablene, Tex.....	1	.....	New Orleans, La.....	1	.....
Bakersfield, Cal.....	2	.....	New York, N. Y.....	.....	2
Little Rock, Ark.....	2	.....	Palestine, Tex.....	2	.....
Memphis, Tenn.....	1	.....	Richmond, Va.....	1	.....
Natick, Mass.....	2	.....	Tuscaloosa, Ala.....	3	.....

**MEASLES.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

Cases.		Cases.	
Camp Funston zone, Kans.....	1	Camp Shelby zone, Miss.....	1
Camp Joseph E. Johnston zone, Fla.....	1	Camp Sherman zone, Ohio.....	1
Camp Pike zone, Ark.....	5	Camp Wadsworth zone, S. C.....	1

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 2076.

**PELLAGRA.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

	Cases.		Cases.
Gas and Flame School zone, Ga. and Ala.....	1	Camp Pike zone, Ark.....	1

**State Reports for September and October, 1918.**

Place.	New cases reported.	Place.	New cases reported.
<b>Arizona (October):</b>		<b>Massachusetts (October):</b>	
Maricopa county—		Middlesex County—	
Phoenix.....	1	Waltham.....	1
<b>Kansas (September):</b>		Suffolk county—	
Saline county—		Boston.....	1
Tescott (R. D.).....	1	<b>Total.....</b>	<b>2</b>

**City Reports for Week Ended Nov. 2, 1918.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....	1	1	Nashville, Tenn.....	1	.....
Charleston, S. C.....	.....	3	New York, N. Y.....	.....	1
Memphis, Tenn.....	.....	1	Palestine, Tex.....	1	.....
Montgomery, Ala.....	.....	1			

## PNEUMONIA.

## Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.

	Cases.		Cases.
Camp Bowie zone, Tex.....	18	New London sanitary district, Conn.....	11
Camp Eberts zone, Ark.....	10	Pieric Acid Plant zone, Ga.....	6
Camp Funston zone, Kans.....	8	Camp Pike zone, Ark.....	9
Gas and Flame School zone, Ga. and Ala.....	17	Camp Sherman zone, Ohio.....	4
Gerstner Field zone, La.....	12	Camp Zachary Taylor zone, Ky. and Ind.....	3
Gulfport health district, Miss.....	3	Camp Travis zone, Tex.....	3
Camp Hancock zone, Ga.....	6	Camp Upton zone, N. Y.....	3
Camp MacArthur zone, Tex.....	7	Camp Wheeler zone, Ga.....	1
Camp McClellan zone, Ala.....	4		

## City Reports for Week Ended Nov. 2, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Abilene, Tex.....	12	.....	Long Beach, Cal.....	35	11
Akron, Ohio.....	6	.....	Louisville, Ky.....	7	52
Alameda, Cal.....	1	.....	Lowell, Mass.....	4	1
Ann Arbor, Mich.....	25	23	Lynn, Mass.....	5	.....
Appleton, Wis.....	1	.....	Malden, Mass.....	63	7
Asbury Park, N. J.....	4	1	Manchester, Conn.....	12	5
Auburn, N. Y.....	5	2	Manchester, N. H.....	2	2
Baltimore, Md.....	39	137	Manitowoc, Wis.....	10	9
Barre, Vt.....	2	2	Montclair, N. J.....	7	5
Bayonne, N. J.....	1	.....	Morristown, W. Va.....	8	.....
Beaumont, Tex.....	12	18	Morristown, N. J.....	17	18
Berkeley, Cal.....	10	12	Natick, Mass.....	7	4
Bluefield, W. Va.....	10	6	Newark, N. J.....	527	55
Boston, Mass.....	51	17	New Bedford, Mass.....	10	17
Bridgeport, Conn.....	1	43	New Castle, Ind.....	1	1
Buffalo, N. Y.....	46	51	New London, Conn.....	2	1
Cambridge, Mass.....	3	5	Newport, Ky.....	19	19
Camden, N. J.....	19	25	Newton, Mass.....	1	1
Care Girardeau, Mo.....	12	1	New York, N. Y.....	4,640	1,855
Chelsea, Mass.....	1	.....	North Adams, Mass.....	2	5
Chicago, Ill.....	1,075	456	Northampton, Mass.....	1	.....
Cleveland, Ohio.....	26	153	North Tonawanda, N. Y.....	17	2
Cortland, N. Y.....	11	.....	Norwood, Ohio.....	13	11
Cumberland, R. I.....	3	.....	Oklahoma City, Okla.....	120	40
Detroit, Mich.....	128	204	Palestine, Tex.....	6	1
Duluth, Minn.....	4	5	Pasadena, Cal.....	5	.....
Elgin, Ill.....	76	8	Passaic, N. J.....	39	12
Englewood, N. J.....	19	3	Peoria, Ill.....	340	73
Eugene, Oreg.....	3	3	Philadelphia, Pa.....	76	273
Fall River, Mass.....	4	1	Plainfield, N. J.....	7	4
Fitchburg, Mass.....	3	1	Port Chester, N. Y.....	27	32
Fort Worth, Tex.....	137	49	Redlands, Cal.....	3	3
Frederick, Md.....	2	.....	Richmond, Va.....	2	15
Fremont, Ohio.....	4	3	Rochester, N. Y.....	93	18
Galveston, Tex.....	10	6	Rome, N. Y.....	19	.....
Gardner, Mass.....	2	7	Sacramento, Cal.....	5	56
Geneva, N. Y.....	5	5	Saginaw, Mich.....	4	6
Grand Rapids, Mich.....	18	6	St. Joseph, Mo.....	5	36
Greenwich, Conn.....	17	16	Salem, Mass.....	7	4
Hackensack, N. J.....	19	13	San Diego, Cal.....	4	3
Hancock, Mich.....	1	1	Sandusky, Ohio.....	7	7
Harrison, N. J.....	14	7	Santa Cruz, Cal.....	5	2
Haerhill, Mass.....	21	10	Saratoga Springs, N. Y.....	5	2
Hornell, N. Y.....	18	.....	Sault Ste. Marie, Mich.....	18	7
Houston, Tex.....	87	41	Schenectady, N. Y.....	12	2
Independence, Mo.....	6	6	Shelbyville, Ind.....	1	1
Ishpeming, Mich.....	1	1	Springfield, Mass.....	67	28
Ithaca, N. Y.....	8	13	Toledo, Ohio.....	8	37
Jackson, Mich.....	33	22	Tuscaloosa, Ala.....	4	2
Jersey City, N. J.....	25	.....	Waco, Tex.....	33	23
Kalamazoo, Mich.....	35	15	Watertown, N. Y.....	28	.....
Lackawanna, N. Y.....	14	6	West Orange, N. J.....	3	3
Laurel, Miss.....	1	1	Wichita, Kans.....	6	32
Lawrence, Kans.....	10	8	Winchester, Mass.....	1	1
Lawrence, Mass.....	2	4	Winthrop, Mass.....	2	.....
Leavenworth, Kans.....	2	1	Worcester, Mass.....	18	14
Lincoln, Nebr.....	20	1	Yonkers, N. Y.....	75	11
Little Rock, Ark.....	27	19	Zanesville, Ohio.....	1	6

**POLIOMYELITIS (INFANTILE PARALYSIS).****State Reports for September and October, 1918.**

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas (September):</b>		<b>Massachusetts (October):</b>	
Jefferson County—		Hamshire County—	
Ozawie (R. D.).....	1	Hadley (town).....	1
Marshall County—		Northampton.....	1
Waterville (R. D.).....	1	Middlesex County—	
McPherson County—		Malden.....	1
Marquette.....	1	Norfolk County—	
Montgomery County—		Quincy.....	1
Cherryvale.....	1	Suffolk County—	
Sumner County—		Boston.....	3
Belle Plaine (R. D.).....	1	Total.....	7
Trego County—			
Ogallah.....	3	<b>Washington (September):</b>	
Wabaunsee County—		King County—	
Wamego (R. D.).....	1	Seattle.....	1
Total.....	9	Spokane County—	
		Spokane.....	1
		Total.....	2

**City Reports for Week Ended Nov. 2, 1918.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Chicago, Ill.....	1	.....	Indianapolis, Ind.....	1	.....
Everett, Mass.....	.....	3	New Haven, Conn.....	1	.....

**RABIES IN ANIMALS.****City Reports for Week Ended Nov. 2, 1918.**

During the week ended November 2, 1918, rabies in animals was reported at Columbus, Ohio, and Detroit, Mich., one case each.

**SCARLET FEVER.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

	Cases.		Cases.
Camp Bowie zone, Tex.	1	Fort Leavenworth zone, Kans.	1
Camp Dodge zone, Io a	10	New London sanitary district, Conn.	2
Camp Funston zone, Kans.	1	Fort Oglethorpe zone, Ga. and Tenn.	1
Gerstner Field zone, La.	1	Camp Pike zone, Ark.	1
Camp Gordon zone, Ga.	4	Camp Polk zone, N. C.	1
Camp Greene zone, N. C.	2	Tidewater health district, Va.	1
Camp Hancock zone, Ga.	1	Camp Wheeler zone, Ga.	2
Camp Jackson zone, S. C.	1		

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 2076.

**SMALLPOX.****Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.**

	Cases.		Cases.
Camp Bowie zone, Tex.....	1	Camp Gordon zone, Ga.....	2
Camp Dodge zone, Io "a.....	2	Camp Greene zone, N. C.....	2
Gas and Flame School zone, Ga. and Ala.....	2	Vancouver zone, Wash.....	2

## SMALLPOX—Continued.

## Maryland—Hagerstown.

On November 18, 1918, 5 cases of smallpox were notified at Hagerstown, Md.

## State Reports for September and October, 1918—Vaccination Histories.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
Arizona (October):						
Maricopa County—						
Glendale.....	1				1	
Kansas (September):						
Atchison County—						
Atchison.....	1				1	
Chautauqua County—						
Cedar Vale.....	1				1	
Cherokee County—						
Columbus (R. D.).....	1				1	
Galena.....	1				1	
Cowley County—						
Arkansas City.....	1				1	
Winfield.....	1				1	
Doniphan County—						
Wathena.....	2				2	
Jewell County—						
Superior, Nebr. (R. D.)...	2				2	
Kiowa County—						
Greensburg (R. D.).....	2				2	
Lyon County—						
Reading (R. D.).....	1				1	
Sedgwick County—						
Goddard (R. D.).....	1				1	
Wichita.....	2				2	
Sumner County—						
South Haven (R. D.).....	1				1	
Stafford County—						
Seward.....	2				2	
Trego County—						
Wakeeney (R. D.).....	1				1	
Wabaunsee County—						
Alta Vista (R. D.).....	5				5	
Wyandotte County—						
Kansas City.....	1				1	
Total.....	26				26	
Maryland (September):						
Dorchester County—						
Cambridge.....	1				1	
Washington County—						
Hagerstown.....	17			1	16	
Total.....	18			1	17	



## SMALLPOX—Continued.

## State Reports for September and October, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
<b>Montana (October):</b>			<b>Washington (September):</b>		
Beaverhead County.....	14		Chelan County.....	4	
Big Horn County.....	7		Chelan.....	2	
Cascade County.....	1		Wenatchee.....	7	
Chouteau County.....	5		Douglas County.....	1	
Deerlodge County—			Waterville.....	1	
Anaconda.....	1		Mansfield.....	1	
Fergus County.....	5		Greys Harbor County.....	1	
Lewis and Clarke			King County.....	1	
County—			Lincoln County—		
Helena.....	3		Laurenport.....	3	
Missoula County—			Okanogan County—		
Missoula.....	1		Okanogan.....	1	
Silverbow County—			Pacific County—		
Butte.....	3		Raymond.....	12	
Wibaux County.....	4		Pend Oreille County.....	1	
Yellowstone County.....	1		Pierce County.....	2	
Billings.....	5		Tacoma.....	2	
<b>Total.....</b>	<b>50</b>		Skamania County.....	1	
			Snohomish County.....	1	
<b>Oregon (September):</b>			Arlington.....	1	
Portland.....	12		Snohomish.....	1	
Columbia County.....	1		Spokane County.....	5	
Coos County.....	1		Spokane.....	20	
Peschutes County.....	11		Stevens County.....	1	
Grant County.....	8		Walla Walla County—		
Klamath County.....	2		Waitsburg.....	2	
Lake County.....	3		Walla Walla.....	3	
Marion County.....	1		Whatcom County—		
Umatilla County.....	6		Bellingham.....	2	
Wasco County.....	3		Whitman County—		
Washington County.....	1		Colfax.....	4	
Wheeler County.....	3		Pullman.....	1	
<b>Total.....</b>	<b>52</b>		Yakima County.....	12	
			Toppenish.....	4	
			Yakima.....	4	
			<b>Total.....</b>	<b>101</b>	

## City Reports for Week Ended Nov. 2, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Anderson, Ind.....	5		Marinette, Wis.....	1	
Beaumont, Tex.....	5	3	Milwaukee, Wis.....	4	
Birmingham, Ala.....	1		Minneapolis, Minn.....	3	
Burlington, Iowa.....	1		Muskogee, Okla.....	2	
Cincinnati, Ohio.....	3		Norfolk, Va.....	3	
Cleveland, Ohio.....	4		Oklahoma City, Okla.....	1	
Denver, Colo.....	5		Omaha, Nebr.....	10	
Des Moines, Iowa.....	1		Portland, Oreg.....	1	
Dubuque, Iowa.....	1		Richmond, Va.....	1	
East Cleveland, Ohio.....	1		Saginaw, Mich.....	5	
Elgin, Ill.....	1		Salt Lake City, Utah.....	6	1
Elyria, Ohio.....	2		San Jose, Cal.....	1	
Fort Dodge, Iowa.....	2		Sioux City, Iowa.....	2	
Jacksonville, Ill.....	4		Springfield, Ohio.....	2	
Laurel, Miss.....	1		Superior, Wis.....	4	
Lincoln, Nebr.....	1		Washington, D. C.....	1	
Louisville, Ky.....	1		Wichita, Kans.....	3	
Ludington, Mich.....	2				

## SYPHILIS.

## Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.

	Cases.		Cases.
Camp Bowie zone, Tex.....	2	Camp Pike zone, Ark.....	2
Camp Eberts zone, Ark.....	2	Portsmouth and Norfolk County health district, Va.....	6
Gas and Flame School zone, Ga. and Ala.....	1	Camp Sheridan zone, Ala.....	4
Camp Gordon zone, Ga.....	7	Camp Sherman zone, Ohio.....	1
Camp Greene zone, N. C.....	9	Camp Zachary Taylor zone, Ky. and Ind.....	26
Gulfport health district, Miss.....	1	Tidewater health district, Va.....	1
Camp Jackson zone, S. C.....	7	Camp Travis zone, Tex.....	5
Camp Joseph E. Johnston zone, Fla.....	17	Camp Wadsworth zone, S. C.....	1
Camp Logan zone, Tex.....	10	Camp Wheeler zone, Ga.....	1
Camp MacArthur zone, Tex.....	1	Wilmington sanitary district, N. C.....	1
Camp McClellan zone, Ala.....	2		
Fort Oglethorpe zone, Ga. and Tenn.....	2		

## TETANUS.

## City Reports for Week Ended Nov. 2, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Columbus, Ohio.....		1	St. Louis, Mo.....	1	1
Mobile, Ala.....		1	Winchester, Mass.....		1
New York, N. Y.....		1	Worcester, Mass.....	1	1
Philadelphia, Pa.....	1				

## TUBERCULOSIS.

## Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.

	Cases.		Cases.
Camp Beauregard zone, La.....	1	Camp MacArthur zone, Tex.....	2
Camp Bowie zone, Tex.....	1	New London sanitary district, Conn.....	2
Camp Eberts zone, Ark.....	2	Camp Pike zone, Ark.....	2
Camp Gordon zone, Ga.....	16	Camp Sevier zone, S. C.....	1
Camp Greene zone, N. C.....	3	Camp Sheridan zone, Ala.....	1
Gulfport health district, Miss.....	3	Camp Zachary Taylor zone, Ky. and Ind.....	6
Camp Joseph E. Johnston zone, Fla.....	1	Camp Travis zone, Tex.....	2
Camp Lee zone, Va.....	1	Camp Wadsworth zone, S. C.....	2
Camp Logan zone, Tex.....	3	Wilmington sanitary district, N. C.....	5

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 2076.

## TYPHOID FEVER.

## Cases Reported in Extra-Cantonment Zones, Week Ended Nov. 16, 1918.

	Cases.		Cases.
Camp Beauregard zone, La.....	1	Camp Jackson zone, S. C.....	1
Camp Bowie zone, Tex.....	3	Camp Joseph E. Johnston zone, Fla.....	1
Camp Eberts zone, Ark.....	1	Camp Logan zone, Tex.....	2
Gas and Flame School zone, Ga. and Ala.....	1	Camp Pike zone, Ark.....	2
Gerstner Field zone, La.....	9	Camp Polk zone, N. C.....	2
Camp Gordon zone, Ga.....	1	Camp Sheridan zone, Ala.....	1
Gulfport health district, Miss.....	1	Camp Travis zone, Tex.....	2
Camp Hancock zone, Ga.....	1	Wilmington sanitary district, N. C.....	1

## TYPHOID FEVER—Continued.

## State Reports for September and October, 1918.

Place.	New cases reported.	Place.	New cases reported.
Arizona (October):		Kansas (September)—Continued.	
Maricopa County.....	1	Geary County—	
Kansas (September):		Junction City.....	4
Allen County—		Gove County—	
Elsmore.....	1	Grinnell.....	2
Iola.....	4	Greenwood County—	
Anderson County—		Eureka (R. D.).....	1
Garnett.....	1	Fall River (R. D.).....	1
Atchison County—		Harper County—	
Atchison.....	3	Attica (R. D.).....	1
Barber County—		Bluff City.....	1
Medicine Lodge.....	2	Harvey County—	
Barton County—		Hesston.....	1
Fillmore.....	1	Hodgeman County—	
Bourbon County—		Jetmore (R. D.).....	1
Fort Scott.....	3	Jackson County—	
Hammond.....	1	Mayetta.....	1
Uniontown.....	1	Jefferson County—	
Brown County—		McLouth.....	1
Hiawatha (3 R. D.).....	4	Meriden.....	2
Horton.....	10	Perry (1 R. D.).....	2
Butler County—		Jewell County—	
Augusta (R. D.).....	12	Courtland (R. D.).....	1
Benton (R. D.).....	1	Mankato.....	3
Douglas (1 R. D.).....	2	Otego.....	1
El Dorado (7 R. D.).....	18	Johnson County—	
Haverhill.....	1	Merriam.....	1
Midway.....	1	Spring Hill.....	1
Oil Hill.....	3	Kearny County—	
Toivanda.....	3	Talpin (1 R. D.).....	2
Chase County—		Kingman County—	
Cottonwood Falls.....	1	Kingman.....	2
Strong City.....	1	Murdock.....	1
Cherokee County—		Zenda (R. D.).....	2
Columbus.....	4	Kiowa County—	
Galena.....	1	Greensburg.....	1
Treese.....	2	Haviland (R. D.).....	1
Cheyenne County—		Labette County—	
Bird City.....	1	Altamont (R. D.).....	1
Clark County—		Chetopa.....	2
Englewood.....	1	Parsons.....	5
Clay County—		Leavenworth County—	
Clay Center (R. D.).....	1	Jarbo.....	1
Coffey County—		Leavenworth.....	9
Burlington (3 R. D.).....	3	Linn County—	
Leroy (2 R. D.).....	3	Bois court.....	1
Comanche County—		Centerville.....	1
Coldwater (R. D.).....	3	Ia Cygne (R. D.).....	3
Cowley County—		Mound City (R. D.).....	1
Arkansas City (1 R. D.).....	3	Prescott.....	1
Rock (R. D.).....	1	Lyon County—	
Udall (2 R. D.).....	4	Allen.....	1
Winfield.....	3	Americus.....	1
Crawford County—		Emporia.....	10
Arcadia.....	4	Olpe.....	1
Arma (2 R. D.).....	4	Marion County—	
Croweburg.....	2	Lost Springs.....	2
Franklin.....	4	Marion.....	1
Mulberry.....	3	Marshall County—	
Pittsburg.....	3	Blue Rapids.....	1
Dickinson County—		Frankfort (R. D.).....	1
Hope (1 R. D.).....	2	McPherson County—	
Herington (1 R. D.).....	8	Canton.....	1
Doniphan County—		Inman.....	1
Troy (R. D.).....	3	Meade County—	
Douglas County—		Plains (R. D.).....	1
Baldwin (R. D.).....	1	Miami County—	
Lawrence.....	6	Osawatimie.....	1
Elk County—		Paola.....	1
Fall River (R. D.).....	1	Montgomery County—	
Howard.....	1	Caney (3 R. D.).....	3
Moline (R. D.).....	1	Coffeyville.....	14
Ellis County—		Dearing (R. D.).....	1
Hays (2 R. D.).....	3	Havana.....	1
Ellsworth County—		Independence (1 R. D.).....	9
Kanopolis.....	3	Morris County—	
Ford County—		Dunlap.....	3
Dodge City (1 R. D.).....	3	White City (R. D.).....	3
Franklin County—		Morton County—	
Ottawa.....	3	Elkhart.....	1
Wellsville (R. D.).....	1	Nemaha County—	
		Sabetha (R. D.).....	2

## TYPHOID FEVER—Continued.

## State Reports for September and October, 1918—Continued.

Place.	New cases reported.	Place.	New cases reported.
<b>Kansas (September)—Continued.</b>		<b>Kansas (September)—Continued.</b>	
Neosho County—		Wyandotte County—	
Chanute.....	1	Bethel.....	1
Hertha.....	2	Bonner Springs.....	1
St. Paul.....	3	Kansas City.....	15
Norton County—		<b>Total.....</b>	<b>444</b>
Norton.....	2		
Osage County—		<b>Massachusetts (October):</b>	
Burlingame (1 R. D.).....	2	Barnstable County—	
Melvern.....	2	Barnstable (town).....	1
Osborne County—		Berkshire County—	
Alton (R. D.).....	2	Pittsfield.....	1
Osborne (1 R. D.).....	3	Bristol County—	
Ottawa County—		Attleboro.....	1
Minneapolis.....	1	Easton (town).....	1
Solomon (R. D.).....	2	Fall River.....	6
Pawnee County—		New Bedford.....	3
Tarned (2 R. D.).....	3	Dukes County—	
Phillips County—		Edgartown (town).....	1
Aera (R. D.).....	5	Essex County—	
Glade (R. D.).....	2	Beverly.....	19
Pratt County—		Danvers (town).....	1
Coats (R. D.).....	1	Gloucester.....	6
Pratt County—		Lynn.....	3
Croft (R. D.).....	1	Rowley (town).....	2
Cullison.....	1	Salem.....	1
Pratt (3 R. D.).....	5	Hampden County—	
Sawyer (R. D.).....	1	Southwick (town).....	1
Reno County—		Springfield.....	2
Abbeville (R. D.).....	2	Westfield (town).....	1
Hutchinson.....	2	Hampshire County—	
Rice County—		Amherst (town).....	2
Chase (R. D.).....	1	Northampton.....	1
Frederick.....	1	Middlesex County—	
Little River (1 R. D.).....	3	Cambridge.....	4
Lyons (R. D.).....	1	Everett.....	1
Russell County—		Hudson (town).....	1
Lucas.....	1	Malden.....	1
Russell (1 R. D.).....	2	Marlboro.....	1
Saline County—		Medford.....	1
Salina.....	1	Reading (town).....	1
Sedgwick County—		Somerville.....	2
Clearwater.....	1	Wilmington (town).....	8
Keebi (R. D.).....	2	Woburn.....	1
Mulvane (R. D.).....	1	Norfolk County—	
Valley Center (2 R. D.).....	4	Cohasset (town).....	1
Whita.....	33	Holbrook (town).....	1
Seward County—		Quincy.....	1
Liberal (1 R. D.).....	4	Walpole (town).....	1
Shawnee County—		Plymouth County—	
Tonka.....	7	Bridgewater (town).....	1
Smith County—		Breckton.....	2
Kensington.....	1	Whitman (town).....	1
Sumner County—		Suffolk County—	
Belle Plaine (2 R. D.).....	4	Boston.....	7
Caldwell (R. D.).....	1	Revere.....	2
Conway Springs (R. D.).....	2	Worcester County—	
Geuda Springs.....	1	Charlton (town).....	2
Milton.....	1	Gardner (town).....	1
Mulvane.....	3	Leominster.....	1
Oxford.....	3	North Brookfield (town).....	1
Peck (2 R. D.).....	3	Worcester.....	4
Wellington.....	1	<b>Total.....</b>	<b>100</b>
Wabaunsee County—			
Alta Vista (R. D.).....	1	<b>Montana (October):</b>	
Eskridge (R. D.).....	5	Blaine County.....	1
Washington County—		Cascade County.....	1
Clifton.....	1	Chouteau County.....	3
Morrowville.....	3	Fergus County.....	1
Washington (R. D.).....	3	Custer County.....	1
Wilson County—		Flathead County.....	1
Fall River (R. D.).....	1	Kalispell.....	5
Fredonia (1 R. D.).....	2	Lewis and Clark County—	
Nedasha (R. D.).....	3	Helena.....	2
Woodson County—		Lincoln County.....	5
Neosha Falls.....	3		
Toronto.....	1		

**TYPHOID FEVER—Continued.****State Reports for September and October, 1918—Continued.**

Place.	New cases reported.	Place.	New cases reported.
<b>Montana (October)—Continued.</b>		<b>Washington (September)—Continued.</b>	
Rosebud County.....	4	King County.....	1
Silver Bow County.....	10	Kent.....	1
Butte.....	2	Seattle.....	5
<b>Total.....</b>	<b>36</b>	Klickitat County.....	3
		Goldendale.....	1
		Lewis County—	
<b>Oregon (September):</b>		Centralia.....	1
Portland.....	3	Winlock.....	2
Columbia County.....	2	Lincoln County—	
Grant County.....	2	Dayport.....	1
Hood River County.....	2	Sprague.....	2
Tinn County.....	1	Oranogen County—	
Umatilla County.....	6	Pateros.....	2
Wasco County.....	3	Pacific County—	
Wheeler County.....	1	Hwa'o.....	1
Yamhill County.....	2	South Bend.....	4
<b>Total.....</b>	<b>22</b>	Pierce County.....	2
		Tacoma.....	9
		Snohomish County.....	2
<b>Washington (September):</b>		Everett.....	2
Adams County.....	1	Edmonds.....	1
Asotin County.....	1	Monroe.....	1
Benton County.....	2	Snohomish.....	1
Prosser.....	4	Spo'ane County.....	5
Chelan County.....	2	Spo'ane.....	12
Chelan.....	2	Stevens County.....	5
Wenatchee.....	5	Marcus.....	1
Clallam County.....	1	Thurston County.....	1
Clark County.....	1	Walla Walla County.....	17
Vanouver.....	1	Walla Walla.....	20
Columbia County.....	3	Whatcom County—	
Dayton.....	2	Bellingham.....	1
Ferry County.....	4	Whitman County—	
Franklin County.....	3	Pullman.....	2
Grays Harbor County—		Yakima County.....	18
Aberdeen.....	4	Toppenish.....	3
Cosmopolis.....	1	Yakima.....	1
		<b>Total.....</b>	<b>163</b>

## TYPHOID FEVER—Continued.

City Reports for Week Ended Nov. 2, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albuquerque, N. Mex.	3		Lebanon, Pa.	3	
Allentown, Pa.	1		Little Rock, Ark.	2	
Ann Arbor, Mich.		1	Louisville, Ky.	1	
Baltimore, Md.	4	2	Ludington, Mich.	1	
Beaver Falls, Pa.	1		Lynchburg, Va.	1	1
Benton Harbor, Mich.		1	Medford, Mass.	1	
Beverly, Mass.	1		Memphis, Tenn.	2	1
Birmingham, Ala.	3		Minneapolis, Minn.	2	1
Bluefield, W. Va.	1		Muscatine, Iowa.		1
Boston, Mass.	1	2	Nashville, Tenn.	2	
Buffalo, N. Y.	1	1	New Castle, Pa.	1	
Cambridge, Mass.	2		New Haven, Conn.	1	
Carnegie, Pa.	2		New Orleans, La.	4	1
Charleston, S. C.	3		New York, N. Y.	2	2
Charleston, W. Va.		1	North Tonawanda, N. Y.	1	
Chicago, Ill.	1		North Yarmouth, Wash.	1	
Cleveland, Ohio.	1		Oklahoma City, Okla.		1
Coffeyville, Kans.	2		Philadelphia, Pa.	1	2
Colorado Springs, Colo.	1		Pontiac, Mich.		1
Columbus, Ohio.		1	Racine, Wis.		1
Corning, N. Y.	1		Rock Island, Ill.	2	
Davenport, Iowa.	1		St. Louis, Mo.	9	
Denver, Colo.		1	Santa Cruz, Cal.	2	
Detroit, Mich.		2	Somerville, Mass.	1	
Duluth, Minn.	3		South Bend, Ind.		2
Easton, Pa.	1		Springfield, Mass.	1	
El Paso, Tex.		1	Springfield, Ohio.	2	
Erie, Pa.	1		Tiffin, Ohio.		1
Fall River, Mass.	1		Toledo, Ohio.	2	1
Fargo, N. Dak.	1		Trinidad, Colo.	1	
Fort Worth, Tex.		1	Washington, D. C.		1
Fremont, Ohio.	1		Washington, Pa.	1	
Hackensack, N. J.	1		West Hoboken, N. J.	1	
Hattiesburg, Miss.	1		Wichita, Kans.	3	
Henderson, Ky.		1	Wilmington, Del.	2	2
Holyoke, Mass.	1		Worcester, Mass.		2
Houston, Tex.	1	1	Zanesville, Ohio.	1	

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for September and October, 1918.

Place.	Cases reported.			Place.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
Arizona (October)	1	1	2	Montana (October)	16	26	87
Kansas (September)	94	20	92	Oregon (September)	19	27	24
Massachusetts (October)	409	318	226	Washington (September)	90	102	135

# DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS— Continued.

City Reports for Week Ended Nov. 2, 1918.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Abilene, Tex.	14,954	6			1				2	
Akron, Ohio.	93,604	77	4		1				6	
Alameda, Cal.	28,433	33	1		1		2			
Albuquerque, N. Mex.	14,509								8	5
Alhambra, Pa.	65,109		6		4		1		1	
Alton, Ill.	23,783	25							1	3
Anderson, Ind.	24,230	7								
Ann Arbor, Mich.	15,041	39								
Ansonia, Conn.	16,954	11								1
Appleton, Wis.	18,005	6							1	
Arlington, Mass.	13,073	7								1
Asbury Park, N. J.	14,629	9								
Atlanta, Ga.	186,144	79	2				4		2	2
Attleboro, Mass.	19,776	5	1							
Auburn, N. Y.	37,823	23	1							
Bakersfield, Cal.	17,543		1				1		3	
Baltimore, Md.	594,637	613	10	1			1	1	26	38
Barre, Vt.	12,401	2								
Baronne, N. J.	72,204		4				1		1	
Beatrice, Nebr.	10,437	27								
Bea er Falls, Pa.	13,749		2							
Bellevue, Wash.	34,362		1							
Beloit, Wis.	18,547	22								
Benton Harbor, Mich.	11,089	11								
Berkeley, Cal.	60,427	47	3							
Berlin, N. H.	13,842	3								
Berkshire, Mass.	22,124	5							1	
Finchampton, N. Y.	54,884	53			1					
Birmingham, Ala.	189,716	123	11		2		11		5	5
Bloomington, Ind.	11,661	9								1
Bluefield, W. Va.	16,123	6								
Boston, Mass.	767,813	319	19	2	4		13		52	14
Braddock, Pa.	22,060		2		2					
Brazil, Ind.	10,472	8								
Bridgeport, Conn.	124,724	189	4	1	4		1		2	6
Bristol, Conn.	16,318	11	1						1	
Brookline, Mass.	33,526	6								1
Buffalo, N. Y.	475,781	613	27	3	24	3	9		12	20
Burlington, Iowa.	25,144	7								
Butler, Pa.	28,677		1				1			
Butte, Mont.	44,057	150	2							
Cairo, Ill.	15,995	23			26		1			3
Cambridge, Mass.	114,293	42	3		2				2	2
Camden, N. J.	103,117		7				1		4	
Canton, Ohio.	62,566	62	3				2			1
Cape Girardeau, Mo.	11,146	1								
Carnegie, Pa.	11,963				1					
Champaign, Ill.	15,052	4								
Charleston, S. C.	61,041	55		1						3
Charleston, W. Va.	31,060	68	6		1					3
Charlotte, N. C.	40,759	36	2				1		1	1
Chelsea, Mass.	48,405	24								2
Chester, Pa.	41,857				1				6	
Chicago, Ill.	2,547,201	2,191	115	18	13		25		156	76
Chicopee, Mass.	29,050	38								1
Cincinnati, Ohio.	414,248	382	13		8		4		18	19
Cleveland, Ohio.	692,259	870	31	2	4		11		8	20
Clinton, Mass.	13,075	5								1
Colorado Springs, Colo.	33,965	20					2		2	5
Columbus, Ohio.	220,135	138	4	1			7		3	5
Concord, N. H.	22,558	15					1			1
Cornwall, N. Y.	15,676	12	2						1	
Cortland, N. Y.	13,321	3					1			
Council Bluffs, Iowa.	31,838	28								
Covington, Ky.	59,623	59	2				1		2	3
Cranston, R. I.	26,773	13	1							
Crawfordsville, Ind.	11,443	13			1					1
Cumberland, R. I.	10,968	7								
Danville, Ill.	32,969	47	2				1			
Davenport, Iowa.	49,618		1				1			

<sup>1</sup> Population Apr. 15, 1910.

# DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS— Continued.

City Reports for Week Ended Nov. 2, 1913—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Denver, Colo.	268,439	155	4	.....	1	.....	4	.....	.....	29
Des Moines, Iowa	101,052	.....	4	.....	.....	.....	8	1	.....	.....
Detroit, Mich.	619,848	671	78	14	6	.....	24	.....	18	13
Dover, N. H.	13,276	6	.....	.....	.....	.....	.....	.....	.....	1
Dubuque, Iowa	40,076	28	2	1	1	.....	2	.....	.....	2
Duluth, Minn.	9,077	37	.....	1	.....	.....	.....	.....	.....	.....
East Chicago, Ind.	30,266	36	.....	.....	.....	.....	.....	.....	.....	.....
East Cleveland, Ohio	13,964	.....	.....	.....	.....	.....	1	.....	.....	.....
Easton, Pa.	30,954	.....	1	.....	.....	.....	.....	.....	.....	.....
East Orange, N. J.	43,761	27	.....	.....	1	.....	1	.....	.....	2
Elgin, Ill.	24,562	15	2	.....	.....	.....	.....	.....	3	.....
El Paso, Tex.	69,149	162	.....	.....	1	.....	.....	.....	.....	8
Elvins, Ohio	19,503	8	.....	.....	1	.....	.....	.....	.....	.....
Enclaveood, N. J.	12,603	17	.....	.....	.....	.....	.....	.....	.....	.....
Erie, Pa.	76,592	.....	4	.....	1	.....	.....	.....	.....	.....
Eugene, Oreg.	14,257	3	.....	.....	.....	.....	.....	.....	.....	.....
Everett, Mass.	40,150	.....	.....	1	.....	.....	1	.....	.....	2
Fall River, Mass.	129,828	69	3	1	2	.....	.....	.....	11	5
Fargo, N. Dak.	17,872	24	.....	.....	.....	.....	.....	.....	1	.....
Findlay, Ohio	14,558	8	.....	.....	.....	.....	.....	.....	3	.....
Fitchburg, Mass.	42,119	16	3	.....	.....	.....	.....	.....	2	.....
Fond du Lac, Wis.	21,466	12	.....	.....	.....	.....	1	.....	.....	.....
Fort Dodge, Iowa	21,079	.....	2	.....	.....	.....	.....	.....	.....	.....
Fort Worth, Tex.	101,597	68	2	.....	.....	.....	.....	.....	2	2
Fostoria, Ohio	10,959	10	.....	.....	.....	.....	.....	.....	.....	.....
Frederick, Md.	11,725	7	2	.....	.....	.....	.....	.....	.....	.....
Fremont, Ohio	11,074	3	.....	.....	.....	.....	.....	.....	1	.....
Fresno, Cal.	39,314	31	.....	.....	.....	.....	.....	.....	.....	4
Galesburg, Ill.	24,499	21	.....	.....	1	.....	.....	.....	.....	.....
Galveston, Tex.	42,650	47	.....	.....	.....	.....	.....	.....	.....	2
Gardner, Mass.	17,534	.....	1	.....	.....	.....	1	.....	1	.....
Geneva, N. Y.	13,015	7	.....	.....	.....	.....	.....	.....	.....	.....
Grand Rapids, Mich.	13,461	.....	1	.....	1	.....	12	.....	8	2
Green Bay, Wis.	39,017	25	2	2	.....	.....	.....	.....	2	1
Greenfield, Mass.	1,731	5	1	.....	.....	.....	1	.....	.....	.....
Greenville, S. C.	18,674	8	2	.....	.....	.....	1	.....	.....	.....
Greenwich, Conn.	17,594	.....	.....	.....	2	.....	4	.....	1	1
Hackensack, N. J.	17,417	38	.....	.....	.....	.....	.....	.....	.....	.....
Hancock, Mich.	17,578	1	.....	.....	.....	.....	.....	.....	.....	.....
Harrisburg, Pa.	73,776	.....	.....	.....	1	.....	1	.....	.....	.....
Harrison, N. J.	17,345	13	.....	.....	.....	.....	.....	.....	.....	.....
Hartford, Conn.	11,851	.....	3	.....	13	.....	1	.....	6	2
Hattiesburg, Miss.	17,357	.....	.....	.....	4	.....	1	.....	.....	.....
Haverhill, Mass.	49,180	.....	.....	.....	.....	.....	.....	.....	5	1
Henderson, Ky.	1,312	13	.....	.....	.....	.....	.....	.....	.....	2
Hoboken, N. J.	78,374	53	.....	.....	.....	.....	.....	.....	3	3
Holland, Mich.	1,459	1	.....	.....	.....	.....	.....	.....	.....	.....
Holyoke, Mass.	66,503	47	1	1	.....	.....	1	.....	.....	5
Hoquiam, Wash.	1,730	.....	1	.....	.....	.....	.....	.....	.....	.....
Houston, Tex.	116,878	73	2	.....	.....	.....	.....	.....	.....	4
Independence, Mo.	11,964	12	.....	.....	.....	.....	.....	.....	.....	.....
Indianapolis, Ind.	287,672	169	12	2	2	.....	.....	.....	4	6
Ishpeming, Mich.	11,448	3	.....	.....	.....	.....	.....	.....	.....	.....
Ithaca, N. Y.	16,017	.....	.....	.....	.....	.....	2	.....	.....	.....
Jackson, Mich.	35,996	51	.....	.....	.....	.....	1	.....	.....	1
Jacksonville, Ill.	15,506	20	.....	.....	.....	.....	.....	.....	.....	.....
Jersey City, N. J.	311,557	.....	5	.....	1	.....	7	.....	9	.....
Johnstown, N. Y.	19,678	4	.....	.....	.....	.....	.....	.....	.....	.....
Johnstown, Pa.	70,473	.....	4	.....	22	.....	2	.....	.....	.....
Kalamazoo, Mich.	50,408	46	2	.....	.....	.....	1	.....	6	1
Kansas City, Kans.	101,096	.....	56	.....	1	.....	.....	.....	5	.....
Kearny, N. J.	24,376	19	.....	.....	1	.....	1	.....	2	.....
Kenosha, Wis.	37,833	15	3	.....	.....	.....	2	.....	.....	.....
Knoxville, Tenn.	69,112	.....	2	.....	.....	.....	1	.....	2	2
Kokomo, Ind.	21,979	10	.....	.....	.....	.....	.....	.....	.....	1
Lackawanna, N. Y.	16,719	17	1	.....	20	.....	.....	.....	1	1
La Crosse, Wis.	31,833	23	.....	.....	.....	.....	.....	.....	.....	2
La Fayette, Ind.	21,481	10	1	.....	.....	.....	.....	.....	.....	1
Lancaster, Pa.	61,437	.....	2	.....	.....	.....	.....	.....	.....	.....
Lansing, Mich.	44,499	35	6	.....	.....	.....	1	.....	.....	8

1 Population Apr. 15, 1910.



# DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS— Continued.

City Reports for Week Ended Nov. 2, 1918—Continued.

City.	Popula- tion as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Lawrence, Kans.	13,477	12	1	1						
Lawrence, Mass.	10,993	54	3	1					3	5
Leavenworth, Kans.	17,363	4					1		1	
Lebanon, Pa.	20,947		4						2	
Lima, Ohio	37,145	19	2		1		5		1	2
Lincoln, Nebr.	46,957	46		1	2		1		1	1
Little Rock, Ark.	58,716	32			3		1		1	1
Logansport, Ind.	21,338	11								
Long Beach, Cal.	29,163	30							1	1
Lorain, Ohio.	38,966		2						1	
Louisville, Ky.	240,808	159	7	5			3		9	15
Lowell, Mass.	114,366	63	6		5		1		4	3
Ludington, Mich.	10,566		1							
Lynchburg, Va.	33,497	36	1				2			1
Lynn, Mass.	104,534	29	2		2				1	2
McKeesport, Pa.	48,009		4				1			
Madison, Wis.	31,315	34			1					
Malden, Mass.	52,243	16	8	1						2
Manchester, Conn.	15,859	6								
Manchester, N. H.	79,607	39	2				1		4	4
Minnetonka, Wis.	13,921	11								
Marquette, Wis.	14,610	3					1			
Marion, Ind.	19,943	5		1						
Marquette, Mich.	11,555	2					2			
Mason City, Iowa	14,938	12								
Massillon, Ohio	15,509	9								
Medford, Mass.	26,681	7	2		1					
McLose, Mass.	17,744	4								
Memphis, Tenn.	151,877	170	6	2			2	1	17	10
Milwaukee, Wis.	445,908	208	11		4		30	3	4	12
Minneapolis, Minn.	373,448		18	5						9
Mishawaka, Ind.	17,083	12								
Missoula, Mont.	19,075	22					6			1
Mobile, Ala.	59,201	47	1				1			4
Moline, Ill.	27,976	21	6							1
Monessen, Pa.	23,070		6							
Montclair, N. J.	27,087								2	1
Montgomery, Ala.	44,039	16					1		1	
Morantown, W. Va.	14,444	9								
Morristown, N. J.	13,410	20								
Mount Carmel, Pa.	20,709		3							
Muncie, Ind.	25,533	5	2							1
Muscatine, Iowa	17,713		1	1						
Muskogee, Okla.	47,173				1		1			
Nanticoke, Pa.	23,511				3		1			
Nashua, N. H.	27,541	11								
Nashville, Tenn.	118,136	95			2		4		3	6
Natick, Mass.	19,140	5								
New Albany, Ind.	23,629	8								1
Newark, N. J.	418,789	376	23		2		1		27	11
Newark, Ohio.	37,317	38								
New Bedford, Mass.	121,622	93		1					5	4
Newburyport, Mass.	15,291	5								1
New Castle, Ind.	14,144	5	1						1	
New Castle, Pa.	41,915						5			
New Haven, Conn.	152,275	223	6	2	5		1		7	7
New London, Conn.	21,199	11	1							
New Orleans, La.	377,010	455	1						20	17
Newport, Ky.	32,133	25								
Newport, R. I.	30,585	14								1
Newton, Mass.	44,345	17	3	1						
New York, N. Y.	5,737,492	5,819	254	34	36		33	3	124	215
Norfolk, Va.	91,148		1							
North Adams, Mass.	122,019	22					1			
Northampton, Mass.	27,006	19								
North Braddock, Pa.	15,684		2						1	
North Tonawanda, N. Y.	14,069	17					1			
Norwalk, Conn.	27,332	24								1
Norwood, Ohio.	23,269	15	1							1
Oakland, Cal.	206,405	279	3		3		1			4

<sup>1</sup> Population Apr. 15, 1910.

# DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS— Continued.

City Reports for Week Ended Nov. 2, 1918—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Oak Park, Ill.	27,816	12					1			
Oklahoma City, Okla.	97,598	56	1		1		1			
Omaha, Nebr.	177,777	128	9	3			1			2
Orange, N. J.	38,636	61	2							2
Palestine, Tex.	12,075		4						1	
Parkersburg, W. Va.	21,069	5								
Pasadena, Cal.	49,620	12							1	
Passaic, N. J.	74,478	55	7				1		1	
Pawtucket, R. I.	60,666	75					1		1	
Peekskill, N. Y.	19,034	19								
Peoria, Ill.	72,184	45								
Philadelphia, Pa.	1,735,514	1,771	40	7	6	1	8	1	78	84
Pittsburgh, Pa.	586,196		17		6		3			
Pittsfield, Mass.	39,678	71								
Plainfield, N. J.	24,330	18								
Plymouth, Mass.	14,001	5								
Plymouth, Pa.	19,439		3		3					
Pontiac, Mich.	18,006						2			
Port Chester, N. Y.	16,727	44	2							
Portland, Me.	64,720	35	1							
Portland, Oreg.	808,369	213	3	1			1		7	16
Pottsville, Pa.	22,717		1	1						
Poughkeepsie, N. Y.	30,786	36	2							1
Providence, R. I.	259,865	201	12			2	10	1		7
Quincy, Mass.	39,022	17	1				1		11	1
Racine, Wis.	47,465	24							2	
Raleigh, N. C.	20,274						3			
Reading, Pa.	111,607		3		5		1		1	
Redlands, Cal.	14,573	5								1
Richmond, Va.	158,702	90							2	5
Rochester, N. Y.	264,714		6	1	1		1		2	3
Rockford, Ill.	56,739	47			1					1
Rock Island, Ill.	29,452	18	2							
Rocky Mount, N. C.	12,673	22								
Rome, N. Y.	24,259		1						1	
Rutland, Vt.	15,038	7								
Sacramento, Cal.	68,984	158	2	1					1	5
Saginaw, Mich.	56,469	27	4		21		1		1	
St. Joseph, Mo.	86,498	73		1			1		1	1
St. Louis, Mo.	768,630	426	62	2	11		19		36	12
Salern, Mass.	49,346						2			
Salt Lake City, Utah.	121,623	103	6	1			6			2
San Angelo, Tex.	10,321	13								1
San Bernardino, Cal.	17,616									2
San Diego, Cal.	56,412	69	3						4	5
Sandusky, Ohio	20,226	13								
Sanford, Me.	11,217	16								
San Jose, Cal.	39,510						1			
Santa Cruz, Cal.	15,150	5								1
Saratoga Springs, N. Y.	13,539	10							1	1
Sault Ste. Marie, Mich.	14,130	10								
Schenectady, N. Y.	103,774	64	3				2		8	
Shelbyville, Ind.	11,201	4								
Shenandoah, Pa.	29,753				2					
Sioux City, Iowa.	56,588		1							
Somerville, Mass.	88,618	27	4		4		1		2	3
South Bend, Ind.	70,967	77			3		2		3	3
Southbridge, Mass.	14,465	19								2
Spartanburg, S. C.	21,985	6			1					
Springfield, Ill.	62,623	57	4		1					2
Springfield, Mass.	108,668	101	1		1		2		5	5
Springfield, Mo.	41,169	28								2
Springfield, Ohio.	52,296			1	39					4
Steubenville, Ohio.	28,259	35	2				2		1	
Superior, Wis.	47,167	27								1
Syracuse, N. Y.	158,559	95	4		2		2		3	2
Taunton, Mass.	36,610	50							2	4
Tiffin, Ohio.	12,962	8								
Toledo, Ohio.	202,010	175	5	1	3		1			6
Trenton, N. J.	113,974	158	1		1				3	9
Trinidad, Colo.	14,413						1			

<sup>1</sup> Population Apr. 15, 1910.

# **DIPHThERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—** Continued.

**City Reports for Week Ended Nov. 2, 1918—Continued.**

City.	Popula- tion as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Tuscaloosa, Ala.....	10 824	8	2						2	
Utica, N. Y.....	89,272	35		1						5
Waco, Tex.....	34 015	37			1		1		1	
Warefield, Mass.....	12,947	19	3							3
Waltham, Mass.....	31 011	11							1	
Washington, D. C.....	369,282	302	11		2		1		19	14
Washington, Pa.....	22,076		2							
Watertown, Mass.....	15,188	6	1		2				1	
Watertown, N. Y.....	30,404	30	2							
Wausau, Wis.....	19,666	12								
Westfield, Mass.....	18,769	33		1			1			4
West Hoboken, N. J.....	44,346	35	1		1				1	
West Orange, N. J.....	13 964	4							1	
Wheeling, W. Va.....	43,657	17								
White Plains, N. Y.....	23 321	14			1					2
Wichita, Kans.....	73,597		2						4	1
Wilkes-Barre, Pa.....	78,334		3				2			
Williamsport, Pa.....	34,123		1							
Wilmington, Del.....	95 399	84	1	1			1		7	7
Winchester, Mass.....	10,812	5							1	
Winona, Minn.....	18,543	17								
Winston-Salem, N. C.....	33,136	54							2	3
Winthrop, Mass.....	13,105								1	
Woburn, Mass.....	16,076	5					1			
Worcester, Mass.....	166,106	102	1	1	3	1	4		9	5
Yonkers, N. Y.....	103,066	100				1	2			3
Zanesville, Ohio.....	31,320	37	1						1	1

<sup>1</sup> Population Apr. 15, 1910.

## FOREIGN.

### INFLUENZA ON VESSELS.

#### Steamship "Venezuela" at La Guayra—Steamships at Habana.

Influenza was reported on the steamship *Venezuela*, at La Guayra, from Trinidad and ports in Venezuela, October 25, 1918.

Influenza has been reported on vessels at Habana, Cuba, as follows: Steamship *Esparta*, October 28, 1918, two cases; steamship *Tacony*, October 30, three cases; steamship *Monterey*, October 30, 1918, two cases.

### CHINA.

#### Influenza—Changsha—Hankow.

During the first week in October, 1918, influenza was reported prevalent at Changsha, China, occurring among natives and the foreign population. At Hankow during the two weeks ended October 5, 1918, influenza was reported to be widely prevalent, chiefly among the Chinese population.

### CUBA.

#### Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	Oct. 14-20, 1918.		Remain- ing under treatment Oct. 20, 1918.	Disease.	Oct. 14-20, 1918.		Remain- ing under treatment Oct. 20, 1918.
	New cases.	Deaths.			New cases.	Deaths.	
Diphtheria.....	2	.....	3	Paratyphoid fever..	.....	.....	2
Leprosy.....	.....	.....	17	Scarlet fever.....	.....	.....	1
Malaria.....	20	.....	1 48	Typhoid fever.....	5	2	116
Measles.....	.....	.....	8				

<sup>1</sup> From the interior, 43.

<sup>2</sup> From the interior, 64.

#### Epidemic Influenza—Cienfuegos.

At Cienfuegos, Cuba, influenza was reported November 9, 1918, to be increasing in number and severity of cases.

### HONDURAS.

#### Influenza—Amapala.

During the period from September 16 to 30, 1918, epidemic influenza was reported present at Amapala, Honduras.

**JAMAICA.****Epidemic Influenza.**

On November 2, 1918, epidemic influenza was reported to be spreading throughout the island of Jamaica.

**MEXICO.****Influenza—Salina Cruz.**

Under date of November 17, 1918, influenza was reported to be increasing at Salina Cruz, State of Oaxaca, Mexico, with a daily occurrence of about five fatalities.

**VENEZUELA.****Influenza—La Guayra.**

On October 28, 1918, influenza was reported present at La Guayra, with an estimated daily occurrence of eight fatalities.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.****Reports Received During Week Ended Nov. 22, 1918.<sup>1</sup>****CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Calcutta.....	Aug. 25-Sept. 7....		13	
Rangoon.....	Aug. 25-31.....	1		
Indo-China:				
Cochin-China—				
Saigon.....	Sept. 9-15.....	8	8	
Java:				
East Java—				
Surabaya.....	Aug. 27-Sept. 2....	149	127	
Mid-Java.....	Aug. 22-Sept. 4....	1,043	567	
West Java.....				Aug. 29-Sept. 4, 1918: Cases, 78; deaths, 45.
Batavia.....	Aug. 29-Sept. 4....	69	37	
Philippine Islands:				
Provinces.....				
Bohol.....	Sept. 29-Oct. 5....	53	41	Sept. 29-Oct. 5, 1918: Cases, 158; deaths, 105.
Bulacan.....	do.....	3	2	
Cavite.....	do.....	48	30	Including cases not previously reported.
Oriental Negros.....	do.....	8	6	
Pangasinan.....	do.....	6	3	
Rizal.....	do.....	28	20	
Sorsogon.....	do.....	12	3	

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

**PLAGUE.**

China:				
Amoy.....	Sept. 16-30.....			Present.
Hongkong.....	Sept. 22-28.....	1	1	
Ecuador:				
Guayaquil.....	Sept. 1-30.....	1	1	
Egypt:				
Alexandria.....	Sept. 24-30.....	1		
India:				
Rangoon.....	Aug. 18-31.....	30	30	
Indo-China:				
Cochin-China—				
Saigon.....	Sept. 9-15.....	1		
Java:				
East Java—				
Surabaya.....	Aug. 27-Sept. 9....	29	29	
Mid-Java.....	Aug. 29-Sept. 4....	23	23	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received During Week Ended Nov. 22, 1918—Continued.**

## **SMALLPOX.**

Place.	Date.	Cases.	Deaths.	Remarks.
Canada: New Brunswick— Saint John.....	Nov. 3-9.....	1		
China: Amoy.....	Sept. 16-30.....			Present. Do.
Chungking.....	Sept. 8-14.....			
India: Rangoon.....	Aug. 18-31.....	2	1	
Indo-China: Cochin-China— Saigon.....	Sept. 9-15.....	3		
Java: East Java— Surabaya.....	Aug. 27-Sept. 9.....	25		
Mid-Java.....	Aug. 22-Sept. 4.....	36	1	
West Java.....				Aug. 28-Sept. 11, 1918: Cases, 136; deaths, 76.
Batavia.....	Aug. 28-Sept. 11.....	49	44	
Mexico: Guadaluajara.....	Sept. 1-30.....	1	1	
Newfound and: Harbor Grace.....	Oct. 25-Nov. 1.....	1		
Marystown.....	do.....	1		
Philippine Islands: Manila.....	Sept. 29-Oct. 5.....	8	2	Varioloid, 3.

## **TYPHUS FEVER.**

Egypt: Alexandria.....	Sept. 2-30.....	46	17	
Japan: Nagasaki.....	Oct. 7-13.....	8	2	
Mexico: Guadalajara.....	Sept. 1-30.....	2	1	

## **YELLOW FEVER.**

Ecuador: Guayaquil.....	Sept. 1-30.....	38	25	
Vinces.....	do.....	5	2	

**Reports Received from June 29 to Nov. 15, 1918.**

## **CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
Albania.....				Aug. 7, 1918: Present.
Austria-Hungary: Hungary.....				July 26, 1918: Present.
India: Bombay.....	Mar. 17-June 29.....	12	8	
Do.....	June 30-Aug. 17.....	4	2	
Calcutta.....	Apr. 14-June 29.....		453	May 19-June 1, 1918: Deaths, 74.
Do.....	June 30-Aug. 24.....		67	
Madras.....	Mar. 24-June 1.....	7	4	
Do.....	July 6-Aug. 10.....	36	21	
Mandala'y.....	May 5-June 15.....		8	
Mergui.....	May 19-25.....		1	
Pegu.....	May 25-June 1.....		1	
Rangoon.....	Mar. 30-May 18.....	25	19	
Do.....	June 29-July 20.....	3	2	
Indo-China: Anam.....	Mar. 1-Apr. 30.....	7	5	Jan. 1-Apr. 30, 1918: Cases, 487; deaths, 302.
Cambodia.....	Jan. 1-Apr. 30.....	248	186	
Cochin-China.....	do.....	165	111	May 20-June 16, 1918: Cases, 66; deaths, 55.
Cholon.....	May 20-June 16.....	4		
Saigon.....	Apr. 20-Sept. 1.....	93	19	
Tonkin.....	Jan. 1-Apr. 30.....	7	43	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from June 29 to Nov. 15, 1918—Continued.**

## **CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Java:</b>				
East Java—				
Surabaya.....	June 6-12.....	13	3	Present July 24.
Do.....	June 25-Aug. 26...	506	424	
Mid-Java.....				Apr. 18-June 26, 1918: Cases, 894; deaths, 653. June 27-Aug. 21, 1918: Cases, 1,055; deaths, 709. Present.
Samarang.....	July 24.....			Feb. 22-June 27, 1918: Cases, 1,432; deaths, 859; June 28-Aug. 14, 1918: Cases, 941; deaths, 578.
West Java.....				
Batavia.....	Feb. 22-June 27.....	231	103	
Do.....	June 28-Aug. 14.....	76	52	
Cheribon.....	June 7-27.....	146	111	
Persia.....				June 16-23, 1918: Deaths, 191.
Provinces—				
Chiraz.....	June 27.....			Present, especially among tribes of Gashgaye and in the city of Darab. Present.
Kazovine.....	June 12-15.....			
Kars Province—				
Kazaroun.....				December, 1917: 3 or 4 deaths reported daily.
Mahour-Milati.....				Present in December, 1917, with about 300 fatal cases reported.
Kerman Province—				
Kerman.....				Outbreak, Feb. 5, 1918.
Khorsan.....				Oct. 2-Nov. 15, 1917: Cases, 78; deaths, 56. In 7 localities.
Seistan.....				Nov. 4, 1917: Cases, 6. A part of this Province or region extends into Afghanistan.
<b>Philippine Islands:</b>				
Manila.....	Sept. 22-28.....	5	4	
Provinces.....				Apr. 28-June 29, 1918: Cases, 677; deaths, 428. June 30-Sept. 28, 1918: Cases, 1,615; deaths, 627.
Bohol.....	Apr. 28-June 29.....	65	53	
Do.....	July 7-Sept. 28.....	465	300	
Capiz.....	Apr. 28-May 4.....	1	1	
Cavite.....	Sept. 22-28.....	1		
Cebu.....	May 5-June 22.....	35	10	
Do.....	June 30-Sept. 28.....	459	272	
Leyte.....	Apr. 28-June 29.....	108	39	
Do.....	June 30-Sept. 7.....	38	36	
Misamis.....	Apr. 28-June 22.....	294	163	
Do.....	June 30-Sept. 28.....	316	106	
Oriental Negros.....	June 3-29.....	42	23	
Do.....	June 30-Sept. 28.....	129	61	
Sorsogon.....	June 2-29.....	112	100	
Do.....	July 14-Sept. 28.....	164	68	
Surigao.....	Apr. 28-June 22.....	92	89	
Do.....	June 30-Aug. 17.....	17	17	
<b>Russia:</b>				
Astara.....	Jan. 9-Feb. 27.....	58	48	In vicinity, Feb. 11-23, 1918: Cases, 17; deaths, 14. Province of Transcaucasia.
Petrograd.....	July 7.....			Present.
<b>Sweden:</b>				
Stockholm.....	July 15.....	5	1	From S. S. Angermanland from Petrograd, Russia.
<b>Switzerland:</b>				July 26, 1918: Present.
<b>On vessel:</b>				
S. S. Angermanland.....	July 14.....	8	1	At Stockholm; from Petrograd.

## **PLAGUE.**

<b>Algeria:</b>				
Algiers.....	Sept. 1-30.....	1		
<b>Arabia:</b>				
Aden.....	May 22-28.....		1	
<b>Argentina:</b>				
Buenos Aires.....	Apr. 20-May 22.....	16	2	
Tucuman.....				In March, 1918: 3 cases in an institution.
<b>Brazil:</b>				
Bahia.....	June 16-22.....	1	1	
<b>Ceylon:</b>				
Colombo.....	Mar. 23-June 29.....	22	21	
Do.....	June 30-Aug. 24.....	2	1	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

Reports Received from June 29 to Nov. 15, 1918—Continued.

## **PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>China:</b>				
Amoy.....	July 22-Aug. 18.....			Present.
Hongkong.....	Apr. 14-June 29.....	124	94	
Do.....	June 30-Sept. 7.....	130	104	
<b>Ecuador:</b>				
Duran.....	Apr. 1-30.....	2	10	Feb. 1-28, 1918: Cases, 22; deaths, 8.
Guayaquil.....	May 1-June 15.....	28	1	
Do.....	July 1-Aug. 31.....	1	1	
<b>Egypt:</b>				
Port Said.....	May 19-21.....	2	1	Jan. 1-July 4, 1918: Cases, 438; deaths, 228. 1 pneumonic.
Do.....	July 4.....	1	1	
Provinces—				
Assiout.....	July 27-29.....	2	1	5 septicemic. 1 pneumonic.
Beni-Souef.....	Apr. 26-30.....	2	1	
Fayoum.....	Apr. 21-June 27.....	10	4	
Gizeh.....	June 30.....	1	1	
Keneh.....	May 16.....	1	1	
Minieh.....	Apr. 23-June 10.....	33	14	
Do.....	June 27-July 4.....	17	4	
<b>Great Britain:</b>				
Erwarton.....	June 19.....	1	1	Rural district, Samford, East Suffolk.
London, Port.....	Aug. 17.....	5		On vessel from Calcutta.
Rochester.....	June 2.....	1	1	From S. S. Somali at Gravesend from Bombay.
<b>India:</b>				
Bassein.....	Mar. 25-June 15.....		149	Mar. 31-June 29, 1918: Cases, 163,977; deaths, 132,917. June 30-Aug. 24, 1918: Cases, 12,111; deaths, 8,727.
Do.....	July 7-27.....		9	
Bombay.....	Mar. 24-June 29.....	992	804	
Do.....	June 30-Aug. 17.....	75	61	May 19-June 1, 1918: Deaths, 30.
Calcutta.....	Apr. 14-June 29.....		110	
Do.....	June 30-July 20.....		10	
Benarada.....	Mar. 21-June 29.....		23	Mar. 17-May 4, 1918: Cases, 1,133; deaths, 820.
Karachi.....	Apr. 21-June 29.....	879	807	
Do.....	June 30-Aug. 17.....	26	24	
Madras Presidency.....	Mar. 24-June 15.....	493	362	
Do.....	July 14-Aug. 10.....	716	521	
Mandalay.....	Mar. 17-Apr. 20.....		52	
Moulmein.....	Mar. 24-June 29.....		144	
Do.....	July 7-27.....		16	
Myingyan.....	Mar. 17-Apr. 14.....		10	
Pegu.....	Apr. 14-June 29.....		14	
Do.....	July 7-20.....		3	Jan. 1-Feb. 28, 1918: Cases, 722; deaths, 534.
Prome.....	Mar. 24-June 15.....		24	
Do.....	July 7-27.....		38	
Rangoon.....	Mar. 30-June 22.....	433	418	
Do.....	June 30-Aug. 10.....	192	187	
Toungoo.....	Mar. 24-Apr. 27.....		59	
<b>Indo-China:</b>				
Anam.....	Jan. 1-Apr. 30.....	127	76	May 29-June 8, 1918: Cases, 66; deaths, 30.
Cambodia.....	do.....	290	278	
Cochin-China.....	do.....	227	121	
Cholon.....	May 30-June 8.....	12	6	Jan. 15-Apr. 22, 1918: Cases, 328; deaths, 226.
Saigon.....	Apr. 29-Aug. 25.....	72	42	
Kwang-Chow-Wan.....	Mar. 1-Apr. 30.....	63	38	
Lao.....	Feb. 1-28.....	4	2	June 11-24, 1918: Cases, 21; deaths, 21. June 25-Aug. 26, 1918: Cases, 37; deaths, 37.
Tonkin.....	Mar. 1-Apr. 30.....	21	19	
<b>Java:</b>				
East Java.....				Aug. 17-28, 1918: Cases, 73; deaths, 46.
Residences—				
Djocjakarta.....	Jan. 15-Apr. 8.....	3	34	
Kediri.....	do.....	13	10	Present.
Madicoen.....	do.....	30	30	
Samarang.....	do.....	82	81	
Surabaya.....	do.....	97	97	Do.
Surakarta.....	do.....	12	12	
Mid-Java.....	July 11-17.....	10	10	
Samarang.....	Aug. 15-21.....	19	19	
West Java.....				
Batavia.....	Aug. 17-28.....	49	28	
<b>Mesopotamia:</b>				
Amara.....	May 21-27.....			
Bagdad.....	July 27-Aug. 2.....	4	2	
Bassora.....	May 21-27.....			



# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from June 29 to Nov. 15, 1918—Continued.**

## **PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Peru.....				Jan. 1-June 30, 1917: Cases, 245; deaths, 122. July 1-Dec. 31, 1917: Cases, 169; deaths, 89. For distribution according to departments, see Public Health Reports, July 26, 1918, p. 1261. Apr. 1-May 31, 1918: Cases, 71.
Departments—				
Ancachs.....	Apr. 1-15.....	1		
Cajamarca.....	Apr. 16-May 31.....	7		
Lambayeque.....	do.....	8		
Libertad.....	Apr. 1-May 31.....	40		
Lima.....	do.....	6		
Piura.....	do.....	9		
Rhodesia.....				Aug. 30, 1918: Present in northern Rhodesia.
Siam:				
Bangkok.....	May 10-June 20.....	82	62	
Do.....	July 2-Aug. 31.....	43	35	
Straits Settlements:				
Penang.....	June 2-29.....	6	8	
Do.....	June 30-Aug. 17.....	8	7	
Singapore.....	Apr. 2-June 22.....	61	53	
Do.....	June 30-Aug. 17.....	9	6	
On vessel:				
S. S. Hector.....	Aug. 10-21.....			At Gravesend, port of London, 6 members of crew.
S. S. Mora.....	Aug. 31.....	3	2	At Dundee, Scotland, from Calcutta. One of cases pneumonic.
S. S. Somali.....	May 19.....	3	1	At Gravesend, England, from Bombay. Further case developed June 2 in member of crew at Rochester, England.
S. S. Sunning.....			1	Local steamer at Shanghai; reported Aug. 14, 1918.

## **SMALLPOX.**

Algeria:				
Algiers.....	May 1-June 30.....	121	34	
Do.....	July 1-31.....	1		
Brazil:				
Bahia.....	May 5-June 22.....	2		
Rio de Janeiro.....	May 5-June 29.....	30	4	
Do.....	June 20-Aug. 24.....	155	33	
Santos.....	Apr. 22-28.....		1	
British East Africa:				
Mombasa.....	Jan. 1-June 30.....		5	
Canada:				
British Columbia—				
Victoria.....	June 23-29.....	4		
Do.....	July 7-Aug. 3.....	2		
Manitoba—				
Winnipeg.....	June 9-22.....	5		
Do.....	July 7-26.....	4		
New Brunswick—				
Moncton.....	June 16-22.....	2		
Do.....	July 7-13.....	4		
Nova Scotia—				
Halifax.....	June 22-28.....	10		
Do.....	June 30-Nov. 3.....	116		
Sydney.....	June 30-Aug. 31.....	3		
Ontario.....				June 1-30, 1918: Cases, 15. July 1-31, 1918: Cases, 38. In Indian settlement.
Gloucester.....	Aug. 1-31.....	1		
Nipissing district.....	do.....	5	1	
Ottawa.....	do.....	8		
Wallaceburg.....	do.....	2		
Windsor.....	July 21-27.....	1		
Prince Edward Island—				
Summerside.....	July 9-15.....	1		
Quebec—				
Montreal.....	July 7-13.....	1		
Canal Zone:				
Colon.....	Sept. 22-28.....	1		
Panama.....	Aug. 12-Sept. 28.....	80		
Ceylon:				
Colombo.....	Mar. 22-June 29.....	30	2	
Do.....	June 30-July 27.....	8	2	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from June 29 to Nov. 15, 1918—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>China:</b>				
Amoy.....	Apr. 1-June 29.....	.....	.....	Present.
Do.....	June 30-Sept. 25.....	.....	.....	1 o.
Antung.....	May 20-Aug. 4.....	7	1	
Chungking.....	May 12-June 29.....	.....	.....	1 o.
Do.....	July 21-Aug. 24.....	.....	.....	Do.
Dairen.....	May 7-July 1.....	51	19	
Do.....	July 2-15.....	6	1	
Foochow.....	Aug. 13-24.....	.....	.....	1 o.
Hailor Station.....	Feb. 12-19.....	2	.....	Chinese Eastern Ry.
Harbin.....	Mar. 20-June 3.....	4	.....	1 o.
Do.....	July 1-7.....	2	.....	1 o.
Manchuia Station.....	Feb. 19-June 9.....	5	.....	1 o.
Hongkong.....	Apr. 6-June 8.....	19	2	
Do.....	July 28-Aug. 3.....	1	1	
Nanking.....	June 16-22.....	.....	.....	Present.
Do.....	June 30-Aug. 31.....	.....	.....	1 o.
Shanghai.....	Apr. 21-June 2.....	3	.....	
Tientsin.....	May 19-June 15.....	10	.....	
Tsingtau.....	May 6-June 30.....	28	1	
Do.....	July 1-14.....	4	.....	
<b>Chosen (Korea):</b>				
Cheumupo.....	July 1-31.....	2	1	
<b>Colombia:</b>				
Barranquilla.....	July 14-Oct. 19.....	4	1	
Cartagena.....	May 21-July 1.....	.....	2	
Do.....	July 8-Aug. 19.....	.....	2	
<b>Cuba:</b>				
Cienfuegos.....	Oct. 20-26.....	2	2	
<b>Denmark:</b>				
Copenhagen.....	June 16-22.....	13	.....	
Do.....	July 23-Sept. 28.....	14	.....	
<b>Ecuador:</b>				
Guayaquil.....	Apr. 1-30.....	2	.....	
<b>Egypt:</b>				
Alexandria.....	May 7-13.....	1	.....	
<b>France:</b>				
La Rochelle.....	June 2-8.....	1	1	
Paris.....	Apr. 21-June 29.....	14	3	
Do.....	June 30-Sept. 7.....	19	5	
Rouen.....	May 12-June 15.....	6	.....	
Germany.....	.....	.....	.....	Including varioloid.
Great Britain:	.....	.....	.....	Mar. 24-June 1, 1918: Cases, 29.
Liverpool.....	June 9-15.....	1	.....	From vessel.
<b>Greece:</b>				
Kalamata.....	June 26.....	.....	.....	Present.
<b>India:</b>				
Bombay.....	Mar. 24-June 23.....	1,167	574	
Do.....	June 30-Aug. 17.....	43	19	
Calcutta.....	Apr. 14-June 29.....	.....	246	
Do.....	June 30-Sept. 7.....	.....	57	
Karachi.....	Apr. 6-June 29.....	205	149	
Do.....	June 30-July 20.....	22	3	
Madras.....	Mar. 21-June 15.....	77	27	June 16-22, 1918: Cases, 9; deaths, 6.
Do.....	June 30-Aug. 10.....	82	24	Mar. 17-May 4, 1918: Cases, 77; deaths, 33.
Rangoon.....	Mar. 31-June 22.....	81	35	
Do.....	June 30-Aug. 10.....	9	7	
<b>Indo-China:</b>				
Anam.....	Jan. 1-Apr. 30.....	1,253	149	Jan. 1-Apr. 30, 1918: Cases, 4,043; deaths, 888.
Cambodia.....	do.....	173	48	
Cochin-China.....	do.....	1,967	697	May 20-June 16, 1918: Cases, 67; deaths, 24.
Cholon.....	May 20-June 16.....	1	.....	
Saigon.....	July 30-Aug. 25.....	31	4	
Kwang-Chow-Wan.....	Feb. 1-Apr. 30.....	122	68	
Laos.....	Jan. 1-Feb. 28.....	8	1	
Tonkin.....	Jan. 1-Apr. 30.....	514	55	
<b>Italy:</b>				
Genoa.....	June 14-30.....	19	5	
Do.....	July 2-Aug. 15.....	30	7	
Mezzojuso.....	May 29.....	.....	.....	Many cases. Province of Palermo, Sicily.
Milan.....	July 1-31.....	24	.....	In April, 1918: Cases, 2. May 1-31, 1918: Cases, 54.
Palermo.....	May 30-June 5.....	1	.....	
Turin.....	Apr. 15-June 9.....	16	1	
<b>Japan:</b>				
Kobe.....	Aug. 18-31.....	2	2	
Nagasaki.....	May 2-June 30.....	14	2	
Do.....	July 3-21.....	1	1	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from June 29 to Nov. 15, 1918—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Japan—Continued.				
Taihoku.....	May 21-July 1.....	18	9	Island of Formosa.
Do.....	July 2-Sept. 16.....	9	3	
Tokyo.....	May 5-June 23.....	24	3	Feb. 14-Mar. 13, 1918: Cases, 15.
Java:				
East Java.....				Feb. 12-Apr. 22, 1918: Cases, 26;
Surabaya.....	Feb. 26-June 24.....	10	3	deaths, 4.
Do.....	June 25-Aug. 31.....	51		
Mid-Java.....				Feb. 14-June 26, 1918: Cases, 114;
				deaths, 3. June 27-Aug. 31,
West Java.....				1918: Cases, 104; deaths, 4.
Batavia.....	Feb. 2-June 27.....	108	50	Feb. 22-June 27, 1918: Cases, 473;
Do.....	June 28-Aug. 7.....	118	90	deaths, 148. June 28-Aug. 14,
				1918: Cases, 447; deaths, 171.
Mesopotamia:				
Bagdad.....	Mar. 6-June 28.....	47	7	
Do.....	June 30-July 12.....	3		
Mexico:				
Aguascalientes.....	June 10-16.....		1	
Guadalajara.....	June 1-30.....	3		
Do.....	July 1-31.....	1		
Mazatlan.....	June 5-25.....		2	
Do.....	July 3-Aug. 6.....		3	
Mexico City.....	May 19-June 22.....	78		
Do.....	June 30-Sept. 21.....	22		
Vera Cruz.....	Sept. 16-22.....	8		
Newfoundland:				
Arnolds Cove.....	Oct. 12-18.....	1		
Bay Roberts.....	Aug. 23-Sept. 13.....	8		
Bell Island.....	Sept. 21.....	1		
Carmanville.....	Aug. 31-Sept. 6.....	2		
Colliers.....	Aug. 31-Oct. 11.....	12		
East Wabana.....	Aug. 23-30.....	1		
Greenspond.....	Sept. 21.....	2		
Keels.....	Oct. 6-11.....	4		
Musgrave Harbor.....	Sept. 21.....	1		
Rencontre.....	Oct. 19-25.....	5		
St. Johns.....	Sept. 28-Oct. 25.....	3		
Shearstown.....	Sept. 21.....	2		
Spaniards Bay.....	Oct. 5-11.....	1		
Trout River.....	Sept. 21.....	2		
Wabana.....	Aug. 31-Sept. 6.....	18		
Wadhams.....	Sept. 7-13.....	7		Bell Island.
Philippine Islands:				
Manila.....	Apr. 8-June 29.....	884	616	Variceloid: Cases, 178; 1 death.
Do.....	June 30-Sept. 28.....	123	95	Variceloid: Cases, 11; 1 death.
Portugal:				
Lisbon.....	Feb. 24-June 29.....	97		
Do.....	June 30-Oct. 5.....	327		
Russia:				
Archangel (government).....	June 1-30.....	60		
Lithuania.....	Mar. 3-May 4.....	88	3	
Siam:				
Bangkok.....	May 11-June 29.....	9	3	
Do.....	July 14-Aug. 17.....	2	3	
Siberia:				
Vladivostok.....	May 1-June 30.....	39	7	
Do.....	July 1-Aug. 31.....	5	1	
Spain:				
Coruna.....	Apr. 28-June 30.....	1	1	
Do.....	July 15-Aug. 11.....		2	
Malaga.....	Dec. 1-31.....		29	
Do.....	Jan. 1-31.....		16	
Seville.....	Apr. 1-May 31.....		2	
Do.....	July 1-31.....		4	
Valencia.....	Aug. 11-31.....	5		
Straits Settlements:				
Penang.....	May 5-11.....	2		
Sweden:				
Stockholm.....	June 9-15.....	10		
Tunisia:				
Tunis.....	July 20-Sept. 27.....		7	
Union of South Africa:				
Cape Town.....	July 20-Aug. 2.....	1		From overseas, in a Nigerian
Johannesburg.....	Feb. 1-Apr. 30.....	37		soldier.
On vessel.....				1 case. At Liverpool, England.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from June 29 to Nov. 15, 1918—Continued.**

## **TYPHUS FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
Argentina: Rosario.....	Apr. 1-May 31.....		2	
Austria-Hungary: Hungary.....				Feb. 25-Apr. 28, 1918: Cases, 299 deaths, 9.
Budapest.....	Feb. 25-Apr. 28.....	51	1	
Brazil: Rio de Janeiro.....	May 26-June 8.....	2		
Do.....	July 7-13.....	1		
Canada: Ontario— Toronto.....	Sept. 1-7.....	1		
China: Antung.....	May 20-June 9.....	4		
Do.....	July 8-Sept. 15.....	9	4	
Changsha.....	May 11-17.....	2	1	
Harbin.....	Jan. 1-June 16.....	37		On Chinese Eastern Ry.
Do.....	July 1-7.....	1		
Manchuria Station.....	Jan. 15-June 30.....	41		Do.
Do.....	July 1-14.....	3		
Pogranitchnaya.....	May 20-June 16.....	4		
Shanghai.....	May 5-11.....		1	
Do.....	July 14-20.....	1		
Tsingtau.....	Sept. 16-22.....	2		
Chosen (Korea): Seoul.....	June 1-30.....	17	4	
Do.....	July 1-Aug. 31.....	5	2	
Colombia: Barranquilla.....	Aug. 25-Sept. 7.....		2	
Egypt: Alexandria.....	Aug. 5-July 1.....	1,362	321	
Do.....	July 2-Sept. 23.....	439	117	
Germany: Great Britain: Belfast.....	May 26-June 1.....	1		Apr. 14-May 11, 1918: Cases, 54; deaths, 4. In addition, 101 cases among prisoners of war, of which 9 in Königsberg and 1 in Oppeln, and 3 cases among the repatriated from Volhynia, Russia.
Edinburgh.....	June 3-15.....		1	
Glasgow.....	May 19-June 23.....	13	5	
Do.....	July 21-Aug. 3.....	3		
Greece: Athens.....	Apr. 14-June 30.....	2	5	
Janina.....	Aug. 23.....	15		And in vicinity.
Saloniki.....	Apr. 24-June 23.....		36	
Do.....	June 30-Sept. 23.....		83	
Italy: Corato.....	May 6-June 2.....	4		Province of Bari.
Do.....	Aug. 18-24.....	2		
Monte.....	May 6-June 9.....	25		Do.
Naples.....	Apr. 20-May 5.....	1		
Japan: Kobe.....	July 7-Aug. 3.....	10	5	
Nagasaki.....	May 27-June 23.....	1	1	
Do.....	July 3-Oct. 8.....	21	4	
Tokyo.....	June 24-July 7.....	1		
Java: East Java.....				Feb. 12-Apr. 8, 1918: Cases, 29; deaths, 8.
Surabaya.....	Feb. 12-Apr. 8.....	22	6	
Mid-Java.....				Feb. 14-May 22, 1918: Cases, 32; deaths, 4.
Samarang.....	Feb. 21-May 22.....	10	2	
West Java.....				Feb. 28-June 6, 1918: Cases, 89; deaths, 18.
Batavia.....	Feb. 28-June 6.....	61	15	
Mesopotamia: Bagdad.....	Mar. 29-June 7.....	101		
Do.....	June 30-July 12.....	5		
Mexico: Aguascalientes.....	July 8-14.....		1	
Chihuahua State—Farral.....	July 10.....			Epidemic: Reported present from about June 15, 1918.
Guadalajara.....	June 1-30.....	5	2	
Do.....	July 1-31.....	5	2	
Mexico City.....	May 19-June 22.....	186		
Do.....	June 30-Sept. 21.....	406		
Portugal: Lisbon.....	Feb. 24-May 25.....	5		
Russia: Lithuania.....				Mar. 3-May 4, 1918: Cases, 2,514; deaths, 100.
Poland.....				Mar. 10-May 18, 1918: Cases, 8,593; deaths, 766.
Lodz.....	Mar. 10-May 18.....	470	79	
Warsaw.....	Mar. 10-Apr. 27.....	2,428	376	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—** Continued.

**Reports Received from June 29 to Nov. 15, 1918—Continued.**

## **TYPHUS FEVER—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Siberia:				
Vladivostok.....	May 1-June 15....	16	2	
Do.....	Aug. 1-31.....	5		
Spain:				
Cadiz.....	.....do.....		1	
Almeria.....	Apr. 1-30.....	1		
Sweden:				
Stockholm.....	Aug. 11-17.....	1		
Tunisia:				
Tunis.....	May 18-June 28....	10	3	
Do.....	June 29-Oct. 4....	5	3	
Union of South Africa:				
Cape of Good Hope, State.....				Sept. 10, 1914-Apr. 21, 1918: Cases, 4,587 (European, 34); deaths, 939 (European, 25). June 2-15, 1918: Present in interior towns among natives.
Do.....				July 8-Aug. 3, 1918: Present in interior towns, Port Elizabeth district.
Port Elizabeth.....	Aug. 11-17.....	1		Present in district among natives, Aug. 11-Sept. 14, 1918.
Natal.....				Dec. 1, 1917-Apr. 21, 1918: Cases, 50; deaths, 11.

## **YELLOW FEVER.**

Brazil:				
Bahia.....	Apr. 27-June 29....	27	9	
Do.....	June 30-July 6....	4	2	
Pernambuco.....	June 1-15.....		1	
Do.....	Oct. 17.....			Present.
Ecuador:				
Guayaquil.....	Apr. 1-June 30....	74	39	
Do.....	July 1-Sept. 15....	76	37	And vicinity. Feb. 16-28, 1918: Cases, 2.
Naranjal.....	Apr. 1-June 30....	2	1	
Do.....	Aug. 1-31.....	1	1	
Punta de Piedra.....	.....do.....	1		
Vinces.....	.....do.....	1		
Guatemala:				
Escuintla.....				Nov. 4, 1918: Three cases present.
San Jose.....	To Sept. 27.....		14	Oct. 2, 1918, present.
Do.....	Sept. 29-Oct. 5....	3	1	Nov. 4, 1918: One case present.